Access DB# 85061

SEARCH REQUEST FORM

Scientific and Technical Inf rmati n Center

Requester's Full Name: Brian Pellegrino Examiner #: 77218 Date: 1/23/03
Art Unit: 3738 Phone Number 30 6 5899 Serial Number: 09/917058
Mail Box and Bldg/Room Location: 2D-07 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

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Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Biologic Replacement for Fibrin Clot

Inventors (please provide full names): Martha M. Murray, Michael F. Murray
Jennifer Marler

Earliest Priority Filing Date: 6/22/99

**For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

Claims - limit the following to these:

neutralizing agents can be: sodium hydroxide
hydrochloric acid

protein may be glycosaminoglycan - possibly hyaluronic acid,
) or chondroitin 6-sulphate or carotin sulphate or dermatan sulphate

****

STAFF USE ONLY

Searcher: JEANNE HORRIGAN
Searcher Phone #: 305-5934
Searcher Location: CP2-2008
Date Searcher Picked Up: 1/24
Date Completed: 1/24
Searcher Prep & Review Time: 83
Clerical Prep Time:
Online Time: 67

Type of Search

NA Sequence (#)
AA Sequence (#)
Structure (#)
Bibliographic ✓
Litigation
Fulltext ✓
Patent Family
Other

Vendors and cost where applicable

STN ✓
Dialog ✓
Questel/Orbit
Dr.Link
Lexis/Nexis
Sequence Systems
WWW/Internet
Other (specify)

PTO-1590 (8-01)

840-12

January 24, 2003

TO: Brian Pellegrino, Art Unit 3738
CP2, Room 2-D-07

FROM: Jeanne Horrigan, EIC-3700

SUBJECT: Search Results for Serial #09/917058

Attached are the search results for the "Biologic Replacement for Fibrin Clot," including results of prior art and inventor searches in foreign patent databases, and prior art searches in medical and biotech non-patent databases.

I tagged the items that seemed to me to be most relevant, but **I suggest that you review all of the results**.

Also attached is a "*Search Results Feedback Form*." Your feedback will help enhance our search services.

I hope these results are useful. Please let me know if you would like me to expand or modify the search or if you have any questions.

File 350:Derwent WPIX 1963-2002/UD,UM &UP=200304
(c) 2003 Thomson Derwent
File 347:JAPIO Oct 1976-2002/Sep(Updated 030102)
(c) 2003 JPO & JAPIO
File 371:French Patents 1961-2002/BOPI 200209
(c) 2002 INPI. All rts. reserv.

Set	Items	Description
S1	11350	COLLAGEN
S2	14515	PLATELET? ? OR THROMBOCYTE? ?
S3	112	(EXTRACELLULAR OR EXTRA()CELLULAR)()PROTEIN? ?
S4	3945	GLYCOSAMINOGLYCAN OR HYALURONIC()ACID OR CHONDROITIN(2W)(SULFATE OR SULPHATE)
S5	320	(CAROTIN OR DERMATAN)()(SULFATE OR SULPHATE)
S6	6846	(NEUTRALIZING OR NEUTRALISING)()AGENT? ? OR NEUTRALIZER? ? OR NEUTRALISER? ?
S7	54389	SODIUM()HYDROXIDE OR HYDROCHLORIC()ACID
S8	544	(INTRAARTICULAR OR INTRA()ARTICULAR)
S9	250685	INJURY OR INJURIES OR WOUND OR WOUNDS
S10	33104	RUPTURE? ? OR LESION? ?
S11	34120	TEAR OR TEARS OR TORE OR TORN
S12	15573	MENISC?? OR LIGAMENT? ? OR CARTILAGE OR CARTILAGINOUS OR CARTILAGENOUS
S13	3	S1 AND S2 AND S3:S5 AND S6:S7
S14	6	S1 AND S2 AND S3:S7 AND (S8 OR S12)(3N)S9:S11
S15	6	S14 NOT S13

13/7/1 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX

014770144
WPI Acc No: 2002-590848/200263
Production of contact lenses for treating e.g. dry eyes and allergic symptoms comprises impregnating contact lenses in a solution containing components for eye treatment, care and/or protection
Patent Assignee: WAGENAAR L J (WAGE-I)
Inventor: WAGENAAR L J
Number of Countries: 100 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200260495	A1	20020808	WO 2002NL12	A	20020109	200263	B

Priority Applications (No Type Date): NL 20011017060 A 20010109
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200260495	A1	E	15	A61L-012/08	

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW

Abstract (Basic): WO 200260495 A1
NOVELTY - Production of contact lenses comprises impregnating contact lenses in a solution containing components for eye treatment, care and/or protection.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the following:
(1) a composition (A) comprising at least component for eye treatment, care and/or protection;
(2) a contact lens impregnated with (A);
(3) a kit comprising at least one kit of contact lenses and (A), and
(4) a composition for disinfecting and/or conserving contact lenses which contains at least one peptide and/or sugar ester.
ACTIVITY - Ophthalmological; Antiallergic.
No biological data given.
MECHANISM OF ACTION - None given in the source material.
USE - Used for impregnating soft and hard lenses, disposable lenses, long lasting ands extended wear lenses and intra-ocular lenses for long term eye treatment, care and protection. The lenses are used for treating dry eye and allergic symptoms and protecting the cornea. The lenses are used for applying substances for treating eye diseases at a more constant level than by using eye drops or eye balm.
ADVANTAGE - Compounds used for disinfecting, cleaning, insertion, moisturizing, rinsing and storing contact lenses need to be added separately. Users of contact lenses do not need to perform any supplemental action, so that use of their lenses is economical.
pp; 15 DwgNo 0/0
Derwent Class: B05; D16; D22; P32; P34
International Patent Class (Main): A61L-012/08
International Patent Class (Additional): A61F-009/00; A61K-009/00

13/7/2 (Item 2 from file: 350)
DIALOG(R)File 350:Derwent WPIX

013466320
WPI Acc No: 2000-638263/200061
Antagonists against diseases such as heterotopic ossification induced by

dimers or multimers, is derived from respective dimers or multimers by omission of a monomer unit or a wrongly bound or folded monomer unit

Patent Assignee: UNIV ZURICH (UYZU-N); UNIV ZUERICH (UYZU-N)
Inventor: SAILER H F; WEBER F E
Number of Countries: 086 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200056879	A1	20000928	WO 99IB466	A	19990322	200061	B
AU 9932693	A	20001009	AU 9932693	A	19990322	200103	
			WO 99IB466	A	19990322		

Priority Applications (No Type Date): WO 99IB466 A 19990322
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200056879	A1	E	38	C12N-015/11	

Designated States (National): AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZA ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ UG ZW

AU 9932693	A		C12N-015/11	Based on patent WO 200056879

Abstract (Basic): WO 200056879 A1

NOVELTY - Antagonists (I) for biological processes induced by dimers or multimers (agonist) (II) derived from the respective dimers or multimers by omission of at least one monomer unit and/or at least one wrongly bound or folded monomer unit, are new.

DETAILED DESCRIPTION - Antagonists (I) for biological processes induced by (II) activating such processes due to interactions with more than one receptor site, characterized in that (I) interacts with at least one first receptor site needed to activate the biological process and does not interact with at least one second receptor site needed for such activation, and where the interaction with the second receptor site does not take place due to at least one monomer unit of the dimer or multimer being missing or folded thus that a biological process activating interaction with the second receptor site is impossible.

INDEPENDENT CLAIMS are also included for the following:

(1) preparation of (I);

(2) a DNA encoding BMP that is extending at its N-terminus by a sequence (S1) of at least 5, preferably 10-30 amino acids; and

(3) a pharmaceutical composition comprising (I).

Met-Gly-Ser-Ser-His-His-His-His-His-His-Ser-Ser-Gly-Leu-Val-Pro-Arg-Gly-Ser-His-Met (S1).

ACTIVITY - None given.

MECHANISM OF ACTION - Antagonist (of cytokines) (claimed).

25 mg of carrier was mixed with 120 microliters antagonist probe in 5 mM **hydrochloric acid** (HCl) or TU (not defined) containing 0.5 or 1 mg **chondroitin** 6- **sulfate** sodium from FLUKA. In the control probe no antagonist was added. After 1 hour, 300 microliters of **collagen** was added and mixed with the implant material. The proteins were ethanol precipitated and the pellets formed were dried. Rats were anesthetized and the probes were implanted either subcutaneously or intramuscularly at bilateral sites over the thorax. After 23-28 days the rats were killed by carbon dioxide and the probes removed. The explant was freed from adherent tissue and cut in half. One half was used for histochemistry, the other half was weighed and homogenized in 1.5 ml of cold 3 mM sodium bicarbonate buffered saline of pH 9. The homogenate was centrifuged and pellet was resuspended in 1 ml 5 mM Tris-HCL pH 7.2, and centrifuged. The wash procedure was repeated 3 times. 0.5 M HCl was added to it. The supernatant was given to clinical chemistry for the determination of the calcium concentration by atomic absorption spectrophotometry. The results showed, that the monomer from BMP-4 with and without N-terminal extension inhibit or retard the ossification.

USE - For treating many agonist induced diseases, e.g. heterotopic

ossification (claimed).
ADVANTAGE - (I), BMP antagonists are very efficient agent against undesired ossification due to trauma or operations such as hip replacement, soon after administration, without causing undesired side effects, and is also readily available.
pp; 38 DwgNo 0/0
Derwent Class: B04; D16
International Patent Class (Main): C12N-015/11
International Patent Class (Additional): A61K-038/18; C07K-014/51

13/7/3 (Item 3 from file: 350)
DIALOG(R)File 350:Derwent WPIX

013240283
WPI Acc No: 2000-412157/200035
Use of cell adhesion protein in the preparation of a medicament for the prevention of formation of adhesions between gliding surfaces in tissue repair
Patent Assignee: UNIV COLLEGE LONDON (UNLO)
Inventor: BROWN R; MCGROUTHER D A
Number of Countries: 090 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200032225	A1	20000608	WO 99GB4043	A	19991203	200035	B
AU 200015730	A	20000619	AU 200015730	A	19991203	200044	

Priority Applications (No Type Date): GB 9826658 A 19981203
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200032225	A1	E	37	A61K-038/39	

Designated States (National): AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW

AU 200015730	A		A61K-038/39	Based on patent WO 200032225

Abstract (Basic): WO 200032225 A1
NOVELTY - Use of cell adhesion protein in the preparation of a medicament for the prevention of formation of adhesions between gliding surfaces in tissue repair.
DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for preventing the formation of adhesion between gliding surfaces in tissue repair comprising applying a cell adhesion protein to at least one of the gliding surfaces.
USE - To prevent the formation of adhesions between gliding surfaces in tissue repair, especially where the tissue to be repaired is gut or tendon (claimed). The medicament may also be used as part of a wound dressing.
ADVANTAGE - Use of the new medicament reduces the need for repeat surgery which is often required to remove adhesions after primary surgery. There is also no need for repeat surgery to remove the cell adhesion proteins, this is required with current available methods e.g. use of barrier materials, such as silicone.
pp; 37 DwgNo 0/7
Derwent Class: B04
International Patent Class (Main): A61K-038/39
International Patent Class (Additional): A61K-038/36

15/7/1 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX

014681464 **Image available**
WPI Acc No: 2002-502168/200254

Reinforced foam stimulating implant for soft tissue repair and regeneration comprising bioabsorbable polymeric foam layers having pores with open cell structure, reinforcement component and biological component

Patent Assignee: ETHICON INC (ETHI); BOWMAN S M (BOWM-I); BRUKER I (BRUK-I); REZANIA A (REZA-I); BINETTE F (BINE-I); HWANG J (HWAN-I); MELICAN M C (MELI-I)
Inventor: BINETTE F; BOWMAN S M; BRUKER I; HWANG J; REZANIA A; BOWMAN S; MELICAN M C
Number of Countries: 029 Number of Patents: 006
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 1216718	A1	20020626	EP 2001310843	A	20011221	200254	B
CA 2365376	A1	20020621	CA 2365376	A	20011219	200254	
US 20020119177	A1	20020829	US 2000747488	A	20001221	200259	
US 20020127265	A1	20020912	US 2000747488	A	20001221	200262	
			US 2000747489	A	20001221		
			US 200122182	A	20011214		
JP 2002272833	A	20020924	JP 2001388040	A	20011220	200278	
JP 2002320631	A	20021105	JP 2001388080	A	20011220	200304	

Priority Applications (No Type Date): US 200122182 A 20011214; US 2000747488 A 20001221; US 2000747489 A 20001221
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 1216718	A1	E	23	A61L-027/58	
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR					
CA 2365376	A1	E		A61F-002/08	
US 20020119177	A1			A61K-048/00	
US 20020127265	A1			A61K-048/00	CIP of application US 2000747488 CIP of application US 2000747489
JP 2002272833	A		51	A61L-027/00	
JP 2002320631	A		59	A61F-002/08	

Abstract (Basic): EP 1216718 A1

NOVELTY - Bioabsorbable porous reinforced biocompatible tissue repair stimulating implant device comprising bioabsorbable polymeric foam layers having pores with open cell structure, reinforcement component and biological component, is new.

DETAILED DESCRIPTION - A biocompatible tissue repair stimulating implant comprises:

(a) bioabsorbable polymeric foam having an open cell pore structure;

(b) reinforcement formed of a biocompatible mesh-containing material, such that (a) is integrated with this and the pores penetrate and interlock with (b); and

(c) 1 or more biological component in association with the implant.

USE - The implant is useful for the repair of **injuries** to the **meniscus** , **ligaments** , tendons, nerves and other soft tissues.

ADVANTAGE - The reinforcement material may be bioabsorbable having a mesh density that permits suturing.

DESCRIPTION OF DRAWING(S) - A sectional view is shown of a constructed tissue implant.

pp; 23 DwgNo 1/7

Derwent Class: B04; B07; D22; P31; P32; P34
International Patent Class (Main): A61F-002/08; A61K-048/00; A61L-027/00; A61L-027/58
International Patent Class (Additional): A61B-017/56; A61F-002/02; A61F-002/38; A61K-031/715; A61K-038/18; A61K-038/19; A61K-039/12; A61L-027/16; A61L-027/18; A61L-027/22; A61L-027/24; A61L-027/44;

15/7/2 (Item 2 from file: 350)

DIALOG(R)File 350:Derwent WPIX

014385217 **Image available**

WPI Acc No: 2002-205920/200226

Repairing tissue e.g. bone tissue, comprises introducing a temperature-dependent polymer gel composition optionally mixed with blood component(s) such that the composition adheres to tissue and promotes support for cell proliferation

Patent Assignee: BIO SYNTECH CANADA INC (BIOS-N); BUSCHMANN M D (BUSC-I); HOEMANN C D (HOEM-I); MCKEE M D (MCKE-I); BIOSYNTECH CANADA INC (BIOS-N)

Inventor: BUSCHMANN M D; HOEMANN C D; MCKEE M D

Number of Countries: 096 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200200272	A2	20020103	WO 2001CA959	A	20010629	200226	B
AU 200168882	A	20020108	AU 200168882	A	20010629	200235	
US 20020082220	A1	20020627	US 2000214717	P	20000629	200245	
			US 2001896912	A	20010629		

Priority Applications (No Type Date): US 2000214717 P 20000629; US 2001896912 A 20010629

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200200272	A2	E	78	A61L-027/38	

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

AU 200168882	A	A61L-027/38	Based on patent WO 200200272
US 20020082220	A1	A61K-038/39	Provisional application US 2000214717

Abstract (Basic): WO 200200272 A2

NOVELTY - Repairing a tissue of a patient comprises introducing into the tissue a temperature-dependent polymer gel composition optionally mixed with blood component(s), such that the composition adheres to the tissue and promotes support for cell proliferation for repairing the tissue.

DETAILED DESCRIPTION - (A) Repairing a tissue of a patient comprises introducing into the tissue a temperature-dependent polymer gel composition such that the composition adheres to the tissue and promotes support for cell proliferation for repairing the tissue.

INDEPENDENT CLAIMS are also included for the following:

(B) repairing a tissue of a patient comprising introducing a polymer composition in the tissue, the polymer composition being mixable with at least one blood component. The polymer composition when mixed with the blood component results in a mixture. The mixture turns into a non-liquid state in time or upon heating, and the mixture is retained at the site of introduction and adheres to the site to repair the tissue;

(C) a polymer composition for use in repairing a tissue, the polymer composition comprising a polymer and a blood component;

(D) a polymer composition for use in repairing a tissue of a patient, where the polymer composition is mixable with at least one blood component, and the polymer composition when mixed with the blood component results in a mixture which turns into a non-liquid state in time or upon heating. The mixture is retained at the site of introduction and adheres to the site for repairing the tissue;

(E) use of a temperature-dependent polymer gel composition for tissue repair;

(F) use of a polymer composition for repairing a tissue, the

polymer composition being mixable with at least one blood component. The polymer composition when mixed with the blood component results in a mixture which turns into a non-liquid state in time or upon heating. The mixture is retained at the site of introduction for repairing the tissue;

(G) use of a chitosan solution for cell delivery to repair or regenerate a tissue in vivo, the chitosan solution comprising 0.5-3% w/v of chitosan and is formulated to be thermogelling. The solution is mixed with cells prior to being injected into a tissue to be repaired or regenerated;

(H) use of a gelling chitosan solution for culturing cells in vitro, the chitosan solution comprising 0.5-3% w/v of chitosan and being formulated to be thermogelling, the solution being mixed with cells prior to being cultured in vitro;

(I) a polymer composition containing 0.01-10% w/v of 20-100% deacetylated chitosan with average molecular weight of 1 kDa to 10 mDA and a blood component.

ACTIVITY - Osteopathic; dermatological; cytostatic; antiulcer; ophthalmological.

USE - For use in repair (or improving the repair), regeneration, reconstruction or bulking of tissues. The tissues are especially cartilage, meniscus, ligament, tendon, bone, skin, cornea, periodontal tissues, maxillofacial tissues, temporomandibular tissues, abscesses, resected tumors, or ulcers (claimed).

ADVANTAGE - Unlike prior art methods and compositions, the present methods and compositions deliver blood borne wound healing elements in a full-volume non-contracting matrix to an articular **cartilage lesion** . Particularly, they provide a more effective, adhesive and non-contracting blood clot at the site of tissue repair.

DESCRIPTION OF DRAWING(S) - Figures 24A and 24B illustrate the growth of hyaline cartilage in defects treated with blood/polymer mixture versus growth of fibrotic tissue in untreated defects.

pp; 78 DwgNo 24A, 24B/24

Derwent Class: A11; A96; B05; D22; P34
International Patent Class (Main): A61K-038/39; A61L-027/38
International Patent Class (Additional): A61K-031/722; A61K-031/727; A61K-031/728; A61K-031/737; A61L-027/18; A61L-027/20; A61L-027/22

15/7/3 (Item 3 from file: 350)
DIALOG(R)File 350:Derwent WPIX

014112598
WPI Acc No: 2001-596810/200167

Repairing connective tissue-to-bone attachments for sports injuries, comprises a matrix in between the connective tissue and bone, and a composition containing at least one bone matrix protein

Patent Assignee: SULZER BIOLOGICS INC (SULZ)
Inventor: ATKINSON B; BENEDICT J J
Number of Countries: 094 Number of Patents: 003
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200166130	A1	20010913	WO 2001US7130	A	20010307	200167	B
AU 200145461	A	20010917	AU 200145461	A	20010307	200204	
EP 1261365	A1	20021204	EP 2001918377	A	20010307	200280	
			WO 2001US7130	A	20010307		

Priority Applications (No Type Date): US 2000523923 A 20000309
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200166130	A1	E	77	A61K-038/17	

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR

IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
AU 200145461 A A61K-038/17 Based on patent WO 200166130
EP 1261365 A1 E A61K-038/17 Based on patent WO 200166130
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR

Abstract (Basic): WO 200166130 A1

NOVELTY - A product (I) for enhancing an attachment of bone to connective tissues such as tendons, ligaments and cementum, comprising a matrix (II) forming an interface between connective tissue and bone, and a composition containing transforming growth factor beta1, bone morphogenetic protein (BMP)-2, BMP-3 and BMP-7, is new.

DETAILED DESCRIPTION - A product (I) for enhancing an attachment of bone to connective tissues such as tendons, ligaments and cementum comprises:

(A) a matrix (II) configured to interface between connective tissue and bone; and

(B) a composition comprising a mixture (III) of proteins associated with (II) to induce the formation of a bone-cartilage-connective tissue interface at a site of attachment, where the mixture comprises:

(a) transforming growth factor (TGF)-beta1 (0.01 - 10% of total mixture volume);

(b) bone morphogenic protein (BMP)-2 (0.01 - 10% of total mixture volume);

(c) BMP-3 (0.1- 15% of total mixture volume); and

(d) BMP-7 (0.01 - 10% of total mixture volume).

An INDEPENDENT CLAIM is also included for enhancing an attachment of bone to connective tissue by implanting and fixing (I) at a site of attachment.

ACTIVITY - Osteopathic; Antiarthritic. No biological data was provided.

MECHANISM OF ACTION - Physiological bone induction. A **collagen** slurry of bovine tendon type I **collagen** and 10mM HCl was produced, mixed in coupled syringes, injected into molds, incubated at -70 degrees Centigrade for one hour, and lyophilized overnight. The resulting sponges were transplanted into the limbs of skeletally mature New Zealand white rabbits. After two weeks, it was observed that samples containing doses of (I) showed newly formed bone.

USE - (I) is useful for enhancing or producing an attachment of connective tissue to bone, by inducing the formation of a bone-cartilage-connective tissue interface at a site of attachment (claimed). The invention can also be used to repair connective tissue-to-bone attachments. (I) can be applied to sports-related tendon and **ligament injuries** , especially the anterior cruciate ligament (ACL) and the tendons of the rotator cuff. (I) is also useful for regenerating the attachment of alveolar bone to cementum.

ADVANTAGE - The method increases the biochemical strength of the attachment of bone to connective tissue by at least 20 - 50% (claimed). Replicating the natural ontogeny and/or ligament to bone results in a greater quantity of bone which appears faster and is in closer proximity to the connective tissues. There is a rapid increase in the fixation strength of attachment and an increase in the fixation strength in patients with degenerative tendon and/or bone pathology.

pp; 77 DwgNo 0/2

Derwent Class: B04; D16; D22
International Patent Class (Main): A61K-038/17

15/7/4 (Item 4 from file: 350)
DIALOG(R)File 350:Derwent WPIX

013110624 **Image available**
WPI Acc No: 2000-282495/200024
Meniscal augmentation devices for implantation into segmental defects of menisci e.g. tears in patients comprise biocompatible and at least partially bioresorbable fibers of natural polymers and/or analogs

Patent Assignee: REGEN BIOLOGICS INC (REGE-N)
Inventor: LI S; STONE K R
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 6042610	A	20000328	US 8775352	A	19870720	200024	B
			US 89317951	A	19890302		
			US 90520027	A	19900507		
			US 91809003	A	19911217		
			US 94250008	A	19940527		
			US 95457971	A	19950601		
			US 9828284	A	19980224		

Priority Applications (No Type Date): US 94250008 A 19940527; US 8775352 A 19870720; US 89317951 A 19890302; US 90520027 A 19900507; US 91809003 A 19911217; US 95457971 A 19950601; US 9828284 A 19980224
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 6042610	A		18	A61F-002/38	CIP of application US 8775352
					CIP of application US 89317951
					CIP of application US 90520027
					CIP of application US 91809003
					Div ex application US 94250008
					Cont of application US 95457971
					CIP of patent US 4880429
					CIP of patent US 5007934
					CIP of patent US 5108438
					CIP of patent US 5306311
					Div ex patent US 5479033
					Cont of patent US 5735903

Abstract (Basic): US 6042610 A

NOVELTY - Meniscal augmentation devices for implantation into segmental defects of a **meniscus** (e.g. **tears**) are formed as sheets sized for insertion within the defect and comprise biocompatible and at least partially bioresorbable fibers selected from natural polymers and/or their analogs. The devices form a biocompatible and at least partially bioresorbable scaffold adapted for ingrowth of meniscal fibrochondrocytes.

DETAILED DESCRIPTION - A meniscal augmentation device for implanting into a segmental defect of a meniscus comprises a plurality of biocompatible and at least partially bioresorbable fibers selected from natural polymers and/or their analogs. The segmental defect is a tear and the device is formed as a sheet to be inserted into it. When implanted into the defect, the devices establish a biocompatible and at least partially bioresorbable scaffold that comprises a dry, porous volume matrix with a pore size of 50-500 mum. It is adapted for the ingrowth of meniscal fibrochondrocytes, such that the scaffold and ingrown meniscal fibrochondrocytes support natural meniscal load forces and the in vivo outer surface of the composite of the meniscus and the device is substantially the same as that of a natural meniscus without segmental defects.

An INDEPENDENT CLAIM is included for regenerating meniscal tissue in vivo comprising obtaining a meniscal augmentation device as described above and implanting it into the meniscus whereby the in vivo outer surface of the composite of the device and the meniscus is the same as the natural meniscus without a segmental defect.

ACTIVITY - Meniscal tissue regeneration; vulnerary.

MECHANISM OF ACTION - None given.

USE - The devices are used to regenerate meniscal tissue in vivo and are used as meniscal augmentation devices e.g. to repair segmental defects (such as **tears**) in **meniscal** tissue (claimed).

ADVANTAGE - The devices are biocompatible and at least partially bioresorbable and the scaffolds support natural meniscal load forces. The in vivo outer surface of the composite of the meniscus and device is substantially the same as that of a natural meniscus without segmental defects. They provide normal joint motion and strength.

DESCRIPTION OF DRAWING(S) - Diagrammatic representation of final suturing to secure a meniscal augmentation device into a native meniscus.

pp; 18 DwgNo 11/12

Derwent Class: A11; A96; B04; D22; P32

International Patent Class (Main): A61F-002/38

15/7/5 (Item 5 from file: 350)

013085985

WPI Acc No: 2000-257857/200023

Composition for accelerating healing of tissue damage in cartilage **or** wounds , **comprises** thrombocyte **growth factor, fibrin or fibrinogen and polymer**

Patent Assignee: CURATIVE TECHNOLOGIES GMBH (CURA-N)

Inventor: HOFMANN P; JANOWICZ Z A; SPILLECKE F H

Number of Countries: 020 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
DE 19841698	A1	20000316	DE 1041698	A	19980911	200023	B
WO 200015248	A2	20000323	WO 99EP6713	A	19990910	200023	

Priority Applications (No Type Date): DE 1041698 A 19980911

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
DE 19841698	A1		13	A61K-038/36	
WO 200015248	A2	G		A61K-038/18	

Designated States (National): JP US

Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

Abstract (Basic): DE 19841698 A1

NOVELTY - A composition (I) containing at least one **thrombocyte** growth factor (II), fibrin (III) or a precursor (preferably fibrinogen) and at least one further polymer (IV) and/or its precursor, is new.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for the preparation of (I) by mixing components (II) - (IV).

ACTIVITY - Tissue regenerative; vulnerary; dermatological.

MECHANISM OF ACTION - Growth factor.

USE - (I) is used as a medicament or cosmetic, specifically for treating damage in tissues with low regeneration ability and/or limited blood supply, especially in cartilage (particularly of the elastic cartilage, hyaline cartilage or fibrous cartilage of the meniscus) or fascial tissue (particularly of the groin). (I) is also used to treat acute and/or chronic damage in skin and/or soft tissue (specifically caused by diabetes, chronic venous insufficiency, arterial occlusion diseases, decubitus, immunosuppression and/or laparotomy) (all claimed). Typically (I) is useful for accelerating the healing of chronic or post-operative wounds, knee problems or hernias.

Insertion of a 1.5 mm long fibrin/ **collagen** membrane containing REL (a mixture of growth factors released from blood **platelets**) in a **torn** rabbit **meniscus** markedly improved the healing effect, as shown by clinical, mechanical and histological test 12 weeks later.

ADVANTAGE - (I) has a rapid and lasting healing and tissue regenerating effect in types of tissues and wounds which normally only heal very slowly. (I) can be prepared easily in a wide range of forms having controllable mechanical and biological properties such as biodegradation and release rates.

pp; 13 DwgNo 0/1

Derwent Class: A96; B04; D21

International Patent Class (Main): A61K-038/18; A61K-038/36

International Patent Class (Additional): A61K-047/30; A61P-017/02; A61P-019/00; A61K-038-39; A61K-038-38; A61K-038-36; A61K-038/18; A61K-031-715

15/7/6 (Item 6 from file: 350)
DIALOG(R)File 350:Derwent WPIX

012927705 **Image available**
WPI Acc No: 2000-099541/200009

Treating or preventing early stages of degeneration of articular cartilage or subchondral bone in joints comprises administering chondroprotective compound

Patent Assignee: PFIZER PROD INC (PFIZ)
Inventor: EVANS N A; KILROY C R; LUNDY K M; PELLETIER J; RICKETTS A P
Number of Countries: 032 Number of Patents: 008
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 970694	A2	20000112	EP 99303528	A	19990505	200009	B
AU 9931208	A	19991202	AU 9931208	A	19990521	200009	
JP 11349480	A	19991221	JP 99143159	A	19990524	200010	
CA 2272463	A1	19991122	CA 2272463	A	19990520	200018	
HU 9901698	A2	20000228	HU 991698	A	19990521	200020	
KR 99088495	A	19991227	KR 9918561	A	19990521	200059	
NZ 335897	A	20000929	NZ 335897	A	19990521	200066	N
ZA 9903478	A	20010131	ZA 993478	A	19990521	200110	

Priority Applications (No Type Date): US 9886457 P 19980522; NZ 335897 A 19990521
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 970694	A2	E	29	A61K-031/405	
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI					
AU 9931208	A			A61K-031/405	
JP 11349480	A		27	A61K-031/40	
CA 2272463	A1	E		A61K-031/40	
HU 9901698	A2			A61K-031/40	
KR 99088495	A			A61K-031/40	
NZ 335897	A			A61K-031/41	
ZA 9903478	A		56	C07D-000/00	

Abstract (Basic): EP 970694 A2

NOVELTY - Treating or preventing early stages of degeneration of articular cartilage or subchondral bone in one or more joints of a mammal comprises establishing the need for treatment and administering a chondroprotective compound.

DETAILED DESCRIPTION - Treating or preventing early stages of degeneration of articular cartilage or subchondral bone in one or more joints of a mammal in need of treatment, comprising:

(1) establishing the status of the mammal as presently or prospectively being in the early stages and in need of treatment; and

(2) administering a chondroprotective compound of formula (I):

R2=-(C(X)(Y))n-CO-A;

A=OH, 1-4C alkoxy, amino, hydroxy-amino, and mono- or di-(1-2C)-alkylamino;

X, Y=H or 1-2C alkyl;

n=1 or 2;

R6=halo, 1-3C alkyl, -CF3, or NO2;

R9=H; 1-2C alkyl; -CO-R; phenyl or -(1-2C)-alkyl-phenyl (both optionally substituted on the phenyl ring by F or Cl);

R=1-2 C alkyl, phenyl (optionally substituted on the phenyl ring by F or Cl), or -CO2R1; and

R1=1-2 C alkyl:

including its (-)(R) and (+)(S) enantiomers and salts, prodrugs and metabolites which are active for treating or preventing early stages of degeneration of articular cartilage or subchondral bone.

An INDEPENDENT CLAIM is also included for a package for use in commerce for treating or preventing early stages of degeneration of

articular cartilage or subchondral bone in one or more joints of a mammal, comprising an outer carton and inner container removably housed therein; enclosed in which is a dosage form of (I), and associated instructions and information attached to the carton or container enclosed in the carton, or displayed as an integral part of the carton or container. The instructions / information stating in words that (I) will ameliorate, diminish, actively treat, reverse or prevent any injury, damage or loss of articular cartilage or subchondral bone subsequent to the early stages of the degeneration.

ACTIVITY - Antiinflammatory; Antiarthritis; Osteopathic.

USE - Carprofen in mammals is used to treat and prevent **cartilage** and subchondral bone **injury** and loss in inflamed joints.

pp; 29 DwgNo 0/0

Derwent Class: B05

International Patent Class (Main): A61K-031/40; A61K-031/405; A61K-031/41; C07D-000/00

International Patent Class (Additional): A61K-009/22; A61K-009/28; A61K-009/52; A61K-031/00; A61K-045/06; C07D-209/88

File 348:EUROPEAN PATENTS 1978-2003/Jan W04
(c) 2003 European Patent Office
File 349:PCT FULLTEXT 1979-2002/UB=20030116,UT=20030109
(c) 2003 WIPO/Univentio

Set	Items	Description
S1	23657	COLLAGEN
S2	25363	PLATELET? ? OR THROMBOCYTE? ?
S3	1908	(EXTRACELLULAR OR EXTRA()CELLULAR)()PROTEIN? ?
S4	7275	GLYCOSAMINOGLYCAN OR HYALURONIC()ACID OR CHONDROITIN(2W)(SULFATE OR SULPHATE)
S5	864	(CAROTIN OR DERMATAN)()(SULFATE OR SULPHATE)
S6	8506	(NEUTRALIZING OR NEUTRALISING)()AGENT? ? OR NEUTRALIZER? ? OR NEUTRALISER? ?
S7	90379	SODIUM()HYDROXIDE OR HYDROCHLORIC()ACID
S8	3295	(INTRAARTICULAR OR INTRA()ARTICULAR)
S9	116503	INJURY OR INJURIES OR WOUND OR WOUNDS
S10	63194	RUPTURE? ? OR LESION? ?
S11	38063	TEAR OR TEARS OR TORE OR TORN
S12	17096	MENISC?? OR LIGAMENT? ? OR CARTILAGE OR CARTILAGINOUS OR CARTILAGENOUS
S13	5	S1(S)S2(S)S3:S5(S)S6:S7
S14	1281	(S8 OR S12)(3N)S9:S11
S15	3	S13 AND S14
S16	2	S13 NOT S15
S17	140	S1(S)S2(S)S3:S7
S18	4	S14(S)S17
S19	3	S18 NOT S13

15/3,K/1 (Item 1 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00962246
HUMAN CDNAS AND PROTEINS AND USES THEREOF
ADNC ET PROTEINES HUMAINES, AINSI QUE LEURS UTILISATIONS
Patent Applicant/Assignee:
GENSET, Intellectual Property Department, 24, rue Royale, F-75008 Paris, FR, FR (Residence), FR (Nationality), (For all designated states except: US)
Patent Applicant/Inventor:
BEJANIN Stephane, 35, boulevard Rochechouart, F-75009 Paris, FR, FR (Residence), FR (Nationality), (Designated only for: US)
TANAKA Hiroaki, 8, avenue de la Providence, F-92160 Antony, FR, FR (Residence), FR (Nationality), (Designated only for: US)
Legal Representative:
GENSET (commercial rep.), Intellectual Property Department, 24, rue Royale, F-75008 Paris, FR,
Patent and Priority Information (Country, Number, Date):
Patent: WO 200294864 A2 20021128 (WO 0294864)
Application: WO 2001IB1715 20010806 (PCT/WO IB0101715)
Priority Application: US 2001293574 20010525; US 2001298698 20010615; US 2001302277 20010629; US 2001305456 20010713
Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
(EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 188290

Fulltext Availability:
Detailed Description

Detailed Description
... A further specified embodiment of the present invention is a method of promoting cartilage (byaline **cartilage** , fibrocartilage, elastic **cartilage**) **wound** repair or tissue healing, in vitro and in vivo, such as resultant from aging, post...observation that in animals with hypercalcemia caused by xenografts of human tumors, the infusion of **neutralizing** antibodies to PTHrP reverses the hypercalcemia. CaIX binds to and neutralizes the activity of PTHrp...

15/3,K/2 (Item 2 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00855799
NOVEL NUCLEIC ACIDS AND POLYPEPTIDES
NOUVEAUX ACIDES NUCLEIQUES ET POLYPEPTIDES
Patent Applicant/Assignee:
HYSEQ INC, 670 Almanor Avenue, Sunnyvale, CA 94086, US, US (Residence), US (Nationality), (For all designated states except: US)
Patent Applicant/Inventor:
TANG Y Tom, 4230 Ranwick Court, San Jose, CA 95118, US, US (Residence), US (Nationality), (Designated only for: US)
ASUNDI Vinod, 709 Foster City Boulevard, Foster City, CA 94404, US, US (Residence), US (Nationality), (Designated only for: US)
ZHOU Ping, 7595 Newcastle Drive, Cupertino, CA 95014, US, US (Residence), CN (Nationality), (Designated only for: US)
XUE Aidong J, 1621 S. Mary Avenue, Sunnyvale, CA 94087, US, US

(Residence), CN (Nationality), (Designated only for: US)
REN Feiyan, 7703 Oak Meadow Court, Cupertino, CA 95014, US, US (Residence), US (Nationality), (Designated only for: US)
ZHANG Jie, 4930 Poplar Terrace, Campbell, CA 95008, US, US (Residence), CN (Nationality), (Designated only for: US)
WANG Jian-Rui, 744 Stendahl Lane, Cupertino, CA 95014, US, US (Residence), CN (Nationality), (Designated only for: US)
YANG Yonghong, 4230 Ranwick Court, San Jose, CA 95118, US, US (Residence), CN (Nationality), (Designated only for: US)
ZHAO Qing A, 1556 Kooser Road, San Jose, CA 95118, US, US (Residence), CN (Nationality), (Designated only for: US)
GOODRICH Ryle W, 4896 Sandy Lane, San Jose, CA 95124, US, US (Residence), US (Nationality), (Designated only for: US)
LIU Chenghua, 1125 Ranchero Way #14, San Jose, CA 95117, US, US (Residence), CN (Nationality), (Designated only for: US)
DRMANAC Radoje T, 850 East Greenwich Place, Palo Alto, CA 94303, US, US (Residence), YU (Nationality), (Designated only for: US)
WEHRMAN Tom, CCSR Mol Pharm 3210, 269 W. Campus Drive, Stanford, CA 94305, US, US (Residence), US (Nationality), (Designated only for: US)
CHEN Rui-hong, 1031 Flying Fish Street, Foster City, CA 94404, US, US (Residence), US (Nationality), (Designated only for: US)

Legal Representative:
ELRIFI Ivor R (agent), Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C, ., One Financial Center, Boston, MA 02111, US,

Patent and Priority Information (Country, Number, Date):
Patent: WO 200187917 A1 20011122 (WO 0187917)
Application: WO 2001US14826 20010516 (PCT/WO US0114826)
Priority Application: US 2000577408 20000518; US 2000667298 20000922; US 2000695781 20001024; US 2000715869 20001117; US 2001775330 20010201

Parent Application/Grant:
Related by Continuation to: US 2000577408 20000518 (CIP); US 2000667298 20000922 (CIP); US 2000695781 20001024 (CIP); US 2000715869 20001117 (CIP); US 2001775330 20010201 (CIP)

Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English
Filing Language: English
Fulltext Word Count: 92096

Fulltext Availability:
Detailed Description

Detailed Description
... intended for use in yeast or eukaryotic expression systems preferably include a leader sequence enabling **extracellular** secretion of translated protein by a host cell. Altematively, where recombinant protein is expressed without...IL-6, macrophage inflammatory protein 1-alpha (MIP alpha), G-CSF, GM-CSF, thrombopoietin (TPO), **platelet** factor 4 (PF-4), **platelet** -derived growth factor (PDGF), neural growth factors and basic fibroblast growth factor (bFGF).

Since totipotent...

...treat consequent myelo-suppression; in supporting the growth and proliferation of megakaryocytes and consequently of **platelets** therebY allowing prevention or treatment of various **platelet** disorders such as thrombocytopenia, and generally for use in place of or complimentary to **platelet** transfusions; and/or in supporting the growth and profiferation of hematopoietic stem cefis which are...where such fissue is not normally formed, has application in the healing of tendon or **ligament** **tears** , defonnities and other tendon or ligarnent defects in humans and other

animals. Such a preparation...may be combined with other agents beneficial to the treatment of the bone and/or **cartilage** defect, **wound**, or tissue in question. These agents include various growth factors such as epidennal growth factor...

15/3,K/3 (Item 3 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00832582
NOVEL NUCLEIC ACIDS AND POLYPEPTIDES
NOUVEAUX ACIDES NUCLEIQUES ET POLYPEPTIDES
Patent Applicant/Assignee:
HYSEQ INC, 670 Almanor Avenue, Sunnyvale, CA 94086, US, US (Residence), US (Nationality), (For all designated states except: US)
Patent Applicant/Inventor:
TANG Y Tom, 4230 Ranwick Court, San Jose, CA 95118, US, US (Residence), US (Nationality), (Designated only for: US)
LIU Chenghua, 1125 Ranchero Way #14, San Jose, CA 95117, US, US (Residence), CN (Nationality), (Designated only for: US)
DRMANAC Radoje T, 850 East Greenwich Place, Palo Alto, CA 94303, US, US (Residence), YU (Nationality), (Designated only for: US)
Legal Representative:
ELRIFI Ivor R (et al) (agent), Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., One Financial Center, Boston, MA 02111, US,
Patent and Priority Information (Country, Number, Date):
Patent: WO 200164835 A2 20010907 (WO 0164835)
Application: WO 2001US4927 20010226 (PCT/WO US0104927)
Priority Application: US 2000515126 20000228; US 2000577409 20000518
Parent Application/Grant:
Related by Continuation to: US 2000515126 20000228 (CIP); US 2000577409 20000518 (CIP)
Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
(EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 463293

Fulltext Availability:
Detailed Description

Detailed Description
... a leader sequence capable of directing secretion of translated protein into the periplasmic space or **extracellular** medium. Optionally, the heterologous sequence can encode a fusion protein including an amino terminal identification...embodiment a fusion protein comprises a polypeptide according to the invention operably linked to the **extracellular** domain of a second protein. In another embodiment, the fusion protein is a GST-fusion...6, macrophage inflammatory protein I -alpha (MIP-1 -alpha), G-CSF, GM-CSF, thrombopoietin (TPO), **platelet** factor 4 (PF-4), **platelet** -derived growth factor (PDGF), neural growth factors and basic 28 fibroblast growth factor (bFGF). Since ...treat consequent myelo-suppression; in supporting the growth and proliferation of megakaryocytes and consequently of **platelets** thereby allowing prevention or 20 treatment of various **platelet** disorders such as thrombocytopenia, and generally for use in place of or complimentary to **platelet** transfusions; and/or in supporting the growth and proliferation of hematopoletic stem cells which are...such tissue is not normally formed, has 4 application in the healing of tendon or **ligament tears**, defori-nities and other tendon or ligament defects in humans and other

animals. Such a...may be combined with other agents beneficial to the treatment of the bone and/or **cartilage** defect, **wound** , or tissue in question. These agents include various growth factors such as epidermal growth factor...

16/6/1 (Item 1 from file: 349)
00266682
METHOD FOR CONTROLLING O-DESULFATION OF HEPARIN AND COMPOSITIONS PRODUCED THEREBY
PROCEDE DE REGULATION DE LA O-DESULFATATION DE L'HEPARINE ET COMPOSITIONS PRODUITES PAR CE PROCEDE
Publication Language: English
Fulltext Availability:
Detailed Description
Claims
Fulltext Word Count: 11043
Publication Year: 1994

16/6/2 (Item 2 from file: 349)
00171156
NOVEL DERMATAN SULFATE AND HEPARIN OLIGOSACCHARIDES HAVING ANTIATHEROSCLEROTIC ACTIVITY
NOUVEAUX SULFATES DE DERMATANE ET NOUVEAUX OLIGOSACCHARIDES D'HEPARINE ACTIFS CONTRE L'ATHEROSCLEROSE
Publication Language: English
Fulltext Availability:
Detailed Description
Claims
Fulltext Word Count: 4550
Publication Year: 1990

19/6/1 (Item 1 from file: 349)
00966215
DEATH ASSOCIATED KINASE CONTAINING ANKYRIN REPEATS (DAKAR) AND METHODS OF USE
KINASE ASSOCIEE A L'APOPTOSE CONTENANT DES REPETITIONS D'ANKYRINE (DAKAR) ET PROCEDES D'UTILISATION
Publication Language: English
Filing Language: English
Fulltext Availability:
Detailed Description
Claims
Fulltext Word Count: 46790
Publication Year: 2002

19/6/2 (Item 2 from file: 349)
00822930
FIL-1 THETA DNAS AND POLYPEPTIDES
POLYPEPTIDES ET ADN FIL-1 THETA
Publication Language: English
Filing Language: English
Fulltext Availability:
Detailed Description
Claims
Fulltext Word Count: 26460
Publication Year: 2001

19/6/3 (Item 3 from file: 349)
00787722
RIP-3-LIKE DEATH-ASSOCIATED KINASE
KINASE ASSOCIEE A LA MORT DU TYPE DE RIP-3
Publication Language: English
Filing Language: English
Fulltext Availability:
Detailed Description
Claims
Fulltext Word Count: 29937
Publication Year: 2001

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=> d his

     (FILE 'HOME' ENTERED AT 09:03:34 ON 24 JAN 2003)

     FILE 'REGISTRY' ENTERED AT 09:03:41 ON 24 JAN 2003
                E COLLAGEN/CN
                E TYPE 1 COLLAGEN/CN
                E COLLAGEN TYPE 1/CN
L1              5 S E4 OR E5 OR E6 OR E7 OR E8
                E EXTRACELLULAR PROTEIN/CN
                E GLYCOSAMINOGLYCAN
                E GLYCOSAMINOGLYCAN/CN
                E HYALURONIC ACID/CN
L2              1 S E3
                E CHONDROITIN 6 SULFATE/CN
L3              1 S E6
                E CAROTIN SULFATE/CN
                E DERMATAN SULFATE/CN
L4              1 S E3
                E SODIUM HYDROXIDE/CN
L5              1 S E3
                E HYDROCHLORIC ACID/CN
L6              1 S E3

     FILE 'HCAPLUS, MEDLINE, EMBASE, BIOSIS' ENTERED AT 09:09:07 ON 24 JAN 2003
L7              4 S L1
L8          31508 S L2
L9           2964 S L3
L10          8261 S L4
L11         67985 S L5
L12         83133 S L6
L13          8443 S L7 OR COLLAGEN(N)TYPE 1
L14        483110 S PLATELET? OR THROMBOCYTE?
L15          8033 S (EXTRACELLULAR OR EXTRA(W)CELLULAR)(W)PROTEIN?
L16         33776 S GLYCOSAMINOGLYCAN
L17         40394 S L8 OR HYALURONIC ACID
L18         33405 S L9 OR CHONDROITIN(2W)(SULFATE OR SULPHATE)
L19             0 S CAROTIN (W)(SULFATE OR SULPHATE)
L20         14001 S L10 OR DERMATAN(W)(SULFATE OR SULPHATE)
L21         96848 S L15 OR L16 OR L17 OR L18 OR L20
L22          6289 S (NEUTRALIZING OR NEUTRALISING)(W)AGENT? OR NEUTRALIZER? OR NE
L23         83435 S L11 OR SODIUM HYDROXIDE
L24        109983 S L12 OR HYDROCHLORIC ACID
L25        192218 S L22 OR L23 OR L24
L26             0 S L13 AND L14 AND L21 AND L25
L27         21366 S INTRAARTICULAR OR INTRA ARTICULAR
L28       2374774 S INJURY OR INJURIES OR RUPTURE OR RUPTURES OR WOUND OR WOUNDS
L29         91530 S MENISCAL OR MENISCUS OR MENISCI OR LIGAMENT?
L30        135111 S CARTILAGE OR CARTILAGINOUS
L31         27853 S (L27 OR L29 OR L30) (10N) L28
L32        315318 S COLLAGEN
L33            25 S L31 AND L32 AND L14
L34             8 S L21 AND L33
L35             0 S L25 AND L33

=> log hold
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L34 ANSWER 1 OF 8 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:674856 HCAPLUS
DOCUMENT NUMBER: 137:206608
TITLE: Biological replacement for fibrin clot
INVENTOR(S): Murray, Martha M.; Murray, Michael F.; Marler, Jennifer
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 67 pp., Cont.-in-part of U.S. Ser. No. 594,295.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002123805	A1	20020905	US 2001-917058	20010727

PRIORITY APPLN. INFO.: US 1999-140197P P 19990622
US 2000-182972P P 20000216
US 2000-594295 A2 20000615

AB The invention provides compn. and methods for repairing a ruptured anterior cruciate ligament. Ruptured anterior cruciate ligaments were retrieved from patients undergoing anterior cruciate ligament reconstruction. Explants were taken from the rupture site and placed in culture with ah ***collagen*** -based scaffold. Cells migrated from the anterior cruciate ***ligament*** ***rupture*** site into the scaffold at the earliest time point (2 wk). Higher densities of cells were noted to migrate from explants obtained at the site of rupture than from explants taken far from the ***rupture*** site, or from the intact anterior cruciate ***ligaments*** . The anterior cruciate ligament cells in the ***collagen*** - ***glycosaminoglycan*** scaffold reach cell no. densities at some sites similar to those of the intact anterior cruciate ligament.

L34 ANSWER 2 OF 8 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:377959 HCAPLUS
DOCUMENT NUMBER: 136:359671
TITLE: ***Collagen*** -bone material combination for repairing articular lesions
INVENTOR(S): Geistlich, Peter; Schlosser, Lothar
PATENT ASSIGNEE(S): Ed. Geistlich Sohne A.-G. Fur Chemische Industrie, Switz.
SOURCE: Fr. Demande, 19 pp.
CODEN: FRXXBL
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2812553	A1	20020208	FR 2001-8874	20010704
DE 10134514	A1	20020606	DE 2001-10134514	20010716
NL 1018560	A1	20020122	NL 2001-1018560	20010717
JP 2002078791	A2	20020319	JP 2001-216644	20010717
GB 2367497	A1	20020410	GB 2001-17623	20010719

PRIORITY APPLN. INFO.: US 2000-219009P P 20000719
OTHER SOURCE(S): MARPAT 136:359671
AB A prosthetic material for repairing articular lesions comprises porous bone mineral particles free of org. materials which are covered with ***collagen*** on the surface, where the ratio of ***collagen*** to mineral particles is about 1:40. Bovine femur free of org. materials was ground to obtain particle size of 0.2-2 mm. ***Collagen*** type II contg. ***glycosaminoglycan*** was prepd. from pig cartilage (prepn. given). A dispersion of 2 g ***collagen*** in 500 g water was centrifuged and the paste thus obtained was added to 17.5 g of above bone granules. Then, 5 mL of 9% aq. soln. of gelatin was added to the mixt., the water removed, and the mixt. was dried at 60.degree. to obtain the ***collagen*** -bone material.

L34 ANSWER 3 OF 8 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:397826 HCAPLUS
DOCUMENT NUMBER: 135:532
TITLE: Treating or preventing the early stages of degeneration of articular cartilage or subchondral bone in mammals using carprofen and derivatives
INVENTOR(S): Evans, Nigel A.; Kilroy, Carolyn R.; Lundy, Kristin M.; Pelletier, Jean-Pierre
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 24 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2001002401	A1	20010531	US 1999-283993	19990401
US 6506785	B2	20030114		
US 2003008911	A1	20030109	US 2002-228626	20020826

PRIORITY APPLN. INFO.: US 1998-86457P P 19980522
US 1999-283993 A1 19990401
OTHER SOURCE(S): MARPAT 135:532
GI

/ Structure 1 in file .gra /

AB Treating or preventing the early stages of degeneration of articular cartilage or subchondral bone in the affected joint of a mammal is accomplished by administering a chondroprotective compd. I [R2 = (C(X)(Y))nC(O)A; A = OH, C1-4 alkoxy, amino, hydroxyamino, mono-(C1-2)alkylamino, di-(C1-2)alkylamino; X, Y = H, C1-2 alkyl; n = 1, 2; R6 = halo, C1-3 alkyl, CF3, nitro; R9 = H, C1-2 alkyl, Ph, phenyl-(C1-2)alkyl, (where Ph is optionally mono-substituted by F or Cl), -C(O)R (R = C1-2 alkyl, Ph, optionally mono-substituted by F or Cl), -C(O)OR' (R' = C1-2 alkyl)]. This treatment ameliorates, diminishes, actively treats, reverses or prevents any ***injury*** , damage or loss of articular ***cartilage*** or subchondral bone subsequent to said

early stage of the degeneration. Whether or not a mammal needs such treatment is detd. by whether or not it exhibits a statistically significant deviation from normal std. values in synovial fluid or membrane from the affected joint, with respect to at least five of the following substances: increased interleukin-1.beta.; increased tumor necrosis factor .alpha.; increased ratio of IL-1.beta. to IL-1 receptor antagonist protein; increased expression of p55 TNF receptors; increased interleukin-6; increased leukemia inhibitory factor; decreased insulin-like growth factor-1; decreased transforming growth factor .beta.; decreased ***platelet*** -derived growth factor; decreased basic fibroblast growth factor; increased keratan sulfate; increased stromelysin; increased ratio of stromelysin to tissue inhibitor of metalloproteases; increased osteocalcin; increased alk. phosphatase; increased cAMP responsive to hormone challenge; increased urokinase plasminogen activator; increased cartilage oligomeric matrix protein; and increased collagenase.

L34 ANSWER 4 OF 8 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:592511 HCAPLUS
DOCUMENT NUMBER: 133:183077
TITLE: Device and method for regeneration and repair of ***cartilage*** ***lesions***
INVENTOR(S): Atkinson, Brent; Benedict, James J.
PATENT ASSIGNEE(S): Sulzer Biologics, Inc., USA
SOURCE: PCT Int. Appl., 100 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000048550	A2	20000824	WO 2000-US3972	20000216
WO 2000048550	A3	20001214		
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1161201	A2	20011212	EP 2000-915782	20000216
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2002537022	T2	20021105	JP 2000-599344	20000216

PRIORITY APPLN. INFO.: US 1999-250370 A 19990216
WO 2000-US3972 W 20000216

AB Disclosed is a cartilage repair product that induces both cell ingrowth into a bioresorbable material and cell differentiation into cartilage tissue. Such a product is useful for regenerating and/or repairing both vascular and avascular ***cartilage*** ***lesions*** , particularly articular ***cartilage*** ***lesions*** , and even more particularly mensical tissue ***lesions*** , including ***tears*** as well as segmental defects. Also disclosed is a method of regenerating

and repairing ***cartilage*** ***lesions*** using such a product.

L34 ANSWER 5 OF 8 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:172949 HCAPLUS
DOCUMENT NUMBER: 132:227443
TITLE: Growth factor-containing composition for the healing of tissue damage
INVENTOR(S): Janowicz, Zbigniew A.; Hofmann, Peter; Spillecke, Frank Heinz
PATENT ASSIGNEE(S): Curative Technologies G.m.b.H., Germany
SOURCE: Ger. Offen., 14 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19841698	A1	20000316	DE 1998-19841698	19980911
WO 2000015248	A2	20000323	WO 1999-EP6713	19990910
WO 2000015248	A3	20000713		

W: JP, US
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

PRIORITY APPLN. INFO.: DE 1998-19841698 A 19980911

AB A matrix contg. .gtoreq.1 ***platelet*** -derived growth factor or cytokine, fibrin and/or a fibrin precursor (preferably fibrinogen), and .gtoreq.1 addnl. polymer, preferably a biodegradable polymer or precursor thereof, is useful for stimulating the repair of damaged tissues. Preferably the ***platelet*** growth factor is reversibly bound to fibrin and/or fibrinogen and the addnl. polymer or its precursor. The matrix may take the form of a sponge, coagulate, rod, film, membrane, or granules depending on the site of application. The compn. is esp. useful for treatment of damage to tissues characterized by poor blood circulation and/or limited regeneration potential, as well as to skin and/or soft tissues, esp. elastic and/or hyaline fibrous cartilage and fascia. Thus, a ***platelet*** lysate was obtained by degranulation of human blood ***platelets*** with thrombin. A poly(glycolic acid) matrix was impregnated with a mixt. of this lysate and a fibrinogen soln. (2 mg/mL) and the fibrinogen was polymd. with 5 mM CaCl2. Incubation of the dried matrix in buffer resulted in release of the growth factor, as shown by tests for fibroblast proliferation and monocyte chemotaxis and by ELISA. A similarly prepd. fibrin- ***collagen*** membrane contg. ***platelet*** lysate promoted healing of ***meniscus*** ***tears*** in rabbits better than did a fibrin adhesive.

L34 ANSWER 6 OF 8 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1998:509084 HCAPLUS
DOCUMENT NUMBER: 129:140714
TITLE: ***Collagen*** -polysaccharide matrix for bone and cartilage repair
INVENTOR(S): Liu, Linshu; Spiro, Robert C.
PATENT ASSIGNEE(S): Orquest, Inc., USA
SOURCE: PCT Int. Appl., 37 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent

LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9831345	A1	19980723	WO 1998-US838	19980115
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 5866165	A	19990202	US 1997-783650	19970115
AU 9859203	A1	19980807	AU 1998-59203	19980115
AU 727430	B2	20001214		
EP 994694	A1	20000426	EP 1998-902579	19980115
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2000514698	T2	20001107	JP 1998-534551	19980115

PRIORITY APPLN. INFO.: US 1997-783650 A 19970115
WO 1998-US838 W 19980115

AB A matrix and a method for prepg. it are provided to support the growth of tissue, such as bone, cartilage or soft tissue. A polysaccharide is reacted with an oxidizing agent to open sugar rings on the polysaccharide to form aldehyde groups. The aldehyde groups are reacted to form covalent linkages to ***collagen*** . ***Hyaluronic*** ***acid*** was treated with NaIO4 to give hyaluronic polyaldehyde, which was mixed with collagens at the ratio of 1:1. The matrix was implanted into a defective area created in the parietal bone of rats. The radiog. anal. showed that all matrix-filled defects were completely radiodense, with no distinctive defect borders, which indicated complete healing.

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L34 ANSWER 7 OF 8 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 2001141082 EMBASE
TITLE: Toward tissue engineering of the knee meniscus.
AUTHOR: Sweigart M.A.; Athanasiou K.A.
CORPORATE SOURCE: Dr. K.A. Athanasiou, Rice University, Department of Bioengineering, MS-142, P.O. Box 1892, Houston, TX 77251, United States. athanasiou@rice.edu
SOURCE: Tissue Engineering, (2001) 7/2 (111-129).
Refs: 128
ISSN: 1076-3279 CODEN: TIENFP
COUNTRY: United States
DOCUMENT TYPE: Journal; Conference Article
FILE SEGMENT: 009 Surgery
027 Biophysics, Bioengineering and Medical Instrumentation
033 Orthopedic Surgery
LANGUAGE: English
SUMMARY LANGUAGE: English

AB This review details current efforts to tissue engineer the knee meniscus successfully. The meniscus is a fibrocartilaginous tissue found within the

knee joint that is responsible for shock absorption, load transmission, and stability within the knee joint. If this tissue is damaged, either through ***tears*** or degenerative processes, then deterioration of the articular ***cartilage*** can occur. Unfortunately, there is a dearth in the amount of work done to tissue engineer the meniscus when compared to other musculoskeletal tissues, such as bone. This review gives a brief overview of ***meniscal*** anatomy, biochemical properties, biomechanical properties, and ***wound*** repair techniques. The discussion centers primarily on the different components of attempting to tissue engineer the meniscus, such as scaffold materials, growth factors, animal models, and culturing conditions. Our approach for tissue engineering the meniscus is also discussed.

L34 ANSWER 8 OF 8 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 95315089 EMBASE
DOCUMENT NUMBER: 1995315089
TITLE: ***Cartilage*** ***wound*** healing: An overview.
AUTHOR: Silver F.H.; Glasgold A.I.
CORPORATE SOURCE: Department of Pathology, UMDNJ-Robert Wood Johnson Med. Sch.,Piscataway, NJ 08854, United States
SOURCE: Otolaryngologic Clinics of North America, (1995) 28/5 (847-864).
ISSN: 0030-6665 CODEN: OCNABW
COUNTRY: United States
DOCUMENT TYPE: Journal; General Review
FILE SEGMENT: 009 Surgery
LANGUAGE: English
SUMMARY LANGUAGE: English
AB ***Cartilage*** ***wound*** healing is a tentative balance between deposition of type I ***collagen*** in the form of scar tissue and repair by expression of type II ***collagen*** and proteoglycans. Small full-thickness cartilage defects are replaced by fibrocartilage, whereas partial-thickness defects are normally repaired by deposition of fibrous scar tissue. The mechanism of fibrocartilaginous repair appears to be mediated by proliferation and differentiation of mesenchymal cells of the marrow. Biologic grafts such as perichondrium have been successfully used to repair full-thickness defects, probably because they contain progenitor cells that can differentiate into chondroblasts. Other grafts composed of fibrocartilage, such as meniscus, appear potentially useful because they serve as a source for chondrocytes. When graft material is unavailable or cannot be easily fashioned to fit the defect, cell-cultured materials containing chondrocytes or progenitor cells appear promising. Finally, growth factors such as somatomedin-C have growth- promoting effect on cartilage and offer a future means of promoting cartilage repair.

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***File 155: Updating of completed records has resumed.See Help News155.**
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removal, customized scheduling. See HELP ALERT.
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removal, customized scheduling. See HELP ALERT.
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(c) 2003 Inst for Sci Info
***File 34: Alert feature enhanced for multiple files, duplicates**
removal, customized scheduling. See HELP ALERT.
File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec
(c) 1998 Inst for Sci Info
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(c) 2003 INIST/CNRS
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Set	Items	Description
S1	412018	COLLAGEN
S2	628169	PLATELET? ? OR THROMBOCYTE? ?
S3	7147	(EXTRACELLULAR OR EXTRA()CELLULAR)()PROTEIN? ?
S4	98434	GLYCOSAMINOGLYCAN OR HYALURONIC()ACID OR CHONDROITIN(2W)(SULFATE OR SULPHATE)
S5	14363	(CAROTIN OR DERMATAN)()(SULFATE OR SULPHATE)
S6	3886	(NEUTRALIZING OR NEUTRALISING)()AGENT? ? OR NEUTRALIZER? ? OR NEUTRALISER? ?
S7	81879	SODIUM()HYDROXIDE OR HYDROCHLORIC()ACID
S8	28720	(INTRAARTICULAR OR INTRA()ARTICULAR)
S9	1676036	INJURY OR INJURIES OR WOUND OR WOUNDS
S10	1798169	RUPTURE? ? OR LESION? ?
S11	80030	TEAR OR TEARS OR TORE OR TORN
S12	313302	MENISC?? OR LIGAMENT? ? OR CARTILAGE OR CARTILAGINOUS OR CARTILAGENOUS
S13	0	S1 AND S2 AND S3:S5 AND S6:S7
S14	527	S1 AND S2 AND S3:S7
S15	3343792	S9:S11
S16	40728	(S8 OR S12)(3N)S15
S17	2	S14 AND S16
S18	2	RD (unique items)

18/6/1 **(Item 1 from file: 73)**
11123884 EMBASE No: 2001141082
Toward tissue engineering of the knee meniscus
2001

18/6/2 **(Item 2 from file: 73)** a duplicate
06281642 EMBASE No: 1995315089
Cartilage wound **healing: An overview**
1995

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File  50:CAB Abstracts 1972-2002/Dec
         (c) 2003 CAB International
File  71:ELSEVIER BIOBASE 1994-2003/Jan W3
         (c) 2003  Elsevier Science B.V.
File 143:Biol. & Agric. Index 1983-2003/Dec
         (c) 2003 The HW Wilson Co
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File 315:ChemEng & Biotec Abs 1970-2002/Dec
         (c) 2002 DECHEMA

Set     Items   Description
S1      40138   COLLAGEN
S2      60126   PLATELET? ? OR THROMBOCYTE? ?
S3       1830   (EXTRACELLULAR OR EXTRA()CELLULAR)()PROTEIN? ?
S4       9183   GLYCOSAMINOGLYCAN OR HYALURONIC()ACID OR CHONDROITIN(2W)(S-
            ULFATE OR SULPHATE)
S5       1335   (CAROTIN OR DERMATAN)()(SULFATE OR SULPHATE)
S6        723   (NEUTRALIZING OR NEUTRALISING)()AGENT? ? OR NEUTRALIZER? ?
            OR NEUTRALISER? ?
S7      18075   SODIUM()HYDROXIDE OR HYDROCHLORIC()ACID
S8       2374   (INTRAARTICULAR OR INTRA()ARTICULAR)
S9     205795   INJURY OR INJURIES OR WOUND OR WOUNDS
S10    207860   RUPTURE? ? OR LESION? ?
S11      7538   TEAR OR TEARS OR TORE OR TORN
S12     20510   MENISC?? OR LIGAMENT? ? OR CARTILAGE OR CARTILAGINOUS OR C-
            ARTILAGENOUS
S13      3802   S1 AND S2
S14        22   S3:S5 AND S6:S7
S15         0   S13 AND S14
S16        31   S13 AND S3:S7
S17    406513   S9:S11
S18      1488   (S8 OR S12)(3N)S17
S19         0   S16 AND S18
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File  95:TEME-Technology & Management 1989-2003/Jan W1
         (c) 2003 FIZ TECHNIK
File  98:General Sci Abs/Full-Text 1984-2003/Dec
         (c) 2003 The HW Wilson Co.
File   9:Business & Industry(R) Jul/1994-2003/Jan 23
         (c) 2003 Resp. DB Svcs.
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         (c) 2003 The Gale Group
File 160:Gale Group PROMT(R) 1972-1989
         (c) 1999 The Gale Group
File 148:Gale Group Trade & Industry DB 1976-2003/Jan 24
         (c)2003 The Gale Group
File 621:Gale Group New Prod.Annou.(R) 1985-2003/Jan 22
         (c) 2003 The Gale Group
File 636:Gale Group Newsletter DB(TM) 1987-2003/Jan 23
         (c) 2003 The Gale Group
File 441:ESPICOM Pharm&Med DEVICE NEWS 2003/Jan W3
         (c) 2003 ESPICOM Bus.Intell.
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         (c) 2003 The Dialog Corp.
File 481:DELPHES Eur Bus 95-2003/Jan W3
         (c) 2003 ACFCI & Chambre CommInd Paris
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         (c) 2003 McGraw-Hill Co. Inc
File 635:Business Dateline(R) 1985-2003/Jan 23
         (c) 2003 ProQuest Info&Learning

Set     Items   Description
S1      25683   COLLAGEN
S2      27785   PLATELET? ? OR THROMBOCYTE? ?
S3        339   (EXTRACELLULAR OR EXTRA()CELLULAR)()PROTEIN? ?
S4       6495   GLYCOSAMINOGLYCAN OR HYALURONIC()ACID OR CHONDROITIN(2W)(S-
            ULFATE OR SULPHATE)
S5        108   (CAROTIN OR DERMATAN)()(SULFATE OR SULPHATE)
S6       2279   (NEUTRALIZING OR NEUTRALISING)()AGENT? ? OR NEUTRALIZER? ?
            OR NEUTRALISER? ?
S7      14090   SODIUM()HYDROXIDE OR HYDROCHLORIC()ACID
S8        811   (INTRAARTICULAR OR INTRA()ARTICULAR)
S9     846787   INJURY OR INJURIES OR WOUND OR WOUNDS
S10     82611   RUPTURE? ? OR LESION? ?
S11    301314   TEAR OR TEARS OR TORE OR TORN
S12     40340   MENISC?? OR LIGAMENT? ? OR CARTILAGE OR CARTILAGINOUS OR C-
            ARTILAGENOUS
S13       519   S1(S)S2
S14         8   S3:S5(S)S6:S7
S15         0   S13 AND S14
S16         5   S13(S)S3:S7
S17      9003   (S8 OR S12)(3N)S9:S11
S18         0   S16 AND S17
S19        64   S1 AND S2 AND S3:S7
S20         2   S17 AND S19
S21         2   RD (unique items)
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21/6/2 (Item 1 from file: 624)
01069060
Gene Therapy and Tissue Engineering in Sports Medicine
February, 2000
Word Count: 4,134 *Full text available in Formats 5, 7 and 9*
?t21/3,k/1

21/3,K/1 (Item 1 from file: 9)
DIALOG(R)File 9:Business & Industry(R)

02346625 (USE FORMAT 7 OR 9 FOR FULLTEXT)
Orthopedics - The Worldwide Orthopedic Market (3 of 4)
(Several technologies are emerging in orthopaedics, such as resorbables and bone substitutes)
Medical & Healthcare Marketplace Guide, v 1, p I-605+
1998
DOCUMENT TYPE: Journal; Industry Overview (United States)
LANGUAGE: English RECORD TYPE: Fulltext
WORD COUNT: 3666

(USE FORMAT 7 OR 9 FOR FULLTEXT)

TEXT:
...graft substitute materials are commercially available in the U.S. as well, most comprised of **collagen** , hydroxylapatite (HA), tricalcium phosphate or a combination of these three materials or other polymeric materials...

...commercialized or are developing various types of synthetic bone products for use in musculoskeletal applications.
Collagen Technologies Group's (Cohesion's) Collagraft Bone Graft Matrix, a composite of purified fibrillar **collagen** and HA and calcium phosphate, is distributed and marketed by Zimmer in the U.S...

...bone fractures and traumatic osseous defects, is premixed, freeze-dried and does not require refrigeration. **Collagen** is investigating cross-linked **collagen** and **collagen** /ceramic injectables.

Etex allied with Merck KGaA to develop and market alpha-BSM, a calcium... rapid return to work with SRS vs. conventional treatments.

Orquest has developed Healos, a mineralized **collagen** currently in European clinicals for use in spinal fusion and long bone fracture cases. Orquest...

...obsoleting the use of bone graft materials.

Integra LifeSciences has developed a broad platform of **collagen** -based templates for regeneration of bone, cartilage, meniscus and other soft tissues. Each template may the development phase for their Autologous Growth Factor (AGF), a combination of TGF-beta, **platelet** -derived growth factor and other growth factors, mixed with bone graft material. The companies are...

...formation, demonstrating its osteoinductive properties.

Orquest initiated a feasibility clinical trial for its Ossigel, a **hyaluronic acid** /basic fibroblast growth factor matrix (licensed from Scios) that may expedite and augment the fracture...

...accelerate the rate of healing by as much as 50 percent. Anika will manufacture the **hyaluronic acid** component of Ossigel for Orquest.

OrthoLogic acquired a minority equity stake in Chrysalis Biotech, which...

...s technology "induces" chondrocytes to "flock" to areas where repair is

needed.

Biomet obtains fibrillar **collagen** for use in development of tendon repair, tendon/ligament replacement and tendon protection products from... where cartilage defects exist.

An equity purchase by and a collaborative product development agreement with **Collagen** will provide Innovasive Devices with resorbable tissue fixation devices derived from **collagen** -based biomaterials.

Integra LifeSciences has numerous soft tissue regeneration/repair projects in various development stages...

...template.

Integra also teamed up with Johnson & Johnson Professional to develop and market a resorbable **collagen** -based implant, with peptide, for repair and regeneration of articular cartilage. JJPI will develop arthroscopic...

...repair products. Longer term, Interpore will work to develop an rhBMP, which incorporates calcium and **collagen** -binding peptides that bind to Pro Osteon. Preclinical studies are underway.

LifeCell has developed a cryopreserved allogeneic **collagen** matrix for use in repair and/or replacement of ACL, articular cartilage and menisci.

Megabios...

...bioactive materials for repair of cartilage and bone.
ReGen Biologics initiated clinical trials of its **Collagen** Meniscal Implant (CMI) in 1996 and entered Phase I feasibility trials in 1997. The synthetic bovine cartilage/ **collagen** template demonstrated marked postoperative improvement in patients. Other devices under development through ReGen are a...

...distribution rights to CMI outside the U.S. and also obtained rights to purchase proprietary **collagen** from ReGen for other applications.

ReGen has also developed disposable instruments used to repair **meniscal injuries** /conditions.

The company reported on initial Phase I feasibility study results for its CMI, noting...

...autogenous osteochondral grafting technique, Mosaic Plasty. With the Mosaic Plasty technique, surgeons can treat deep **lesions** by harvesting **cartilage** and bone plugs and inserting them into holes drilled in lesions. The technique has demonstrated...

...knee.
Wright Bio-Orthopaedics (Wright Medical Technology), in its agreement with Tissue Engineering, will develop **collagen** -based scaffolds for ligament and tendon reconstruction and cartilage regeneration. TEI's scaffolds may also...

File 369:New Scientist 1994-2003/Jan W3
(c) 2003 Reed Business Information Ltd.
File 370:Science 1996-1999/Jul W3
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File 129:PHIND(Archival) 1980-2003/Jan W3
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File 285:BioBusiness(R) 1985-1998/Aug W1
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File 455:Drug News & Perspectives 1992-2002/Nov
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File 135:NewsRx Weekly Reports 1995-2003/Jan W3
(c) 2003 NewsRx
File 149:TGG Health&Wellness DB(SM) 1976-2003/Jan W1
(c) 2003 The Gale Group
File 442:AMA Journals 1982-2003/Mar B3
(c)2003 Amer Med Assn -FARS/DARS apply
File 444:New England Journal of Med. 1985-2003/Jan W4
(c) 2003 Mass. Med. Soc.

Set	Items	Description
S1	12990	COLLAGEN
S2	22407	PLATELET? ? OR THROMBOCYTE? ?
S3	291	(EXTRACELLULAR OR EXTRA()CELLULAR)()PROTEIN? ?
S4	2485	GLYCOSAMINOGLYCAN OR HYALURONIC()ACID OR CHONDROITIN(2W)(SULFATE OR SULPHATE)
S5	159	(CAROTIN OR DERMATAN)()(SULFATE OR SULPHATE)
S6	243	(NEUTRALIZING OR NEUTRALISING)()AGENT? ? OR NEUTRALIZER? ? OR NEUTRALISER? ?
S7	2988	SODIUM()HYDROXIDE OR HYDROCHLORIC()ACID
S8	1358	(INTRAARTICULAR OR INTRA()ARTICULAR)
S9	97201	INJURY OR INJURIES OR WOUND OR WOUNDS
S10	67038	RUPTURE? ? OR LESION? ?
S11	13817	TEAR OR TEARS OR TORE OR TORN
S12	11885	MENISC?? OR LIGAMENT? ? OR CARTILAGE OR CARTILAGINOUS OR CARTILAGENOUS
S13	3	S1 AND S2 AND S3:S5 AND S6:S7
S14	3	RD (unique items)
S15	150	S1 AND S2 AND S3:S7
S16	2064	(S8 OR S12)(3N)S9:S11
S17	9	S15 AND S16
S18	8	RD (unique items)
S19	8	S18 NOT S13
S20	2	S19/2003 OR S19/2002 OR S19/2001 OR S19/2000
S21	6	S19 NOT S20

14/6/1 **(Item 1 from file: 442)**
00099746

Identification of Glycosaminoglycans in Age-Related Macular Deposits (ARTICLE)
1996;
LINE COUNT: 00427

14/6/2 **(Item 2 from file: 442)**
00085790

The Human Auricular Chondrocyte Responses to Growth Factors (ARTICLE)
1993;
LINE COUNT: 00406

14/6/3 **(Item 3 from file: 442)**
00052040

Altered Distribution of Basic Fibroblast Growth Factor in Diabetic Retinopathy (Article)
1991;

21/6/5 (Item 1 from file: 444)
00105987

The Biology Of Osteoarthritis (Mechanisms of Disease)
1989;

21/6/6 (Item 2 from file: 444)
00101088

Burns (Medical Progress)
1985;
?t21/3,k/1,2,3,4,6

21/3,K/1 (Item 1 from file: 149)
DIALOG(R)File 149:TGG Health&Wellness DB(SM)

01865804 SUPPLIER NUMBER: 57088957 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Induction of Meniscal Regeneration in Dogs Using a Novel Biomaterial.
Cook, James L.; Tomlinson, James L.; Kreeger, John M.; Cook, Cristi Reeves
The American Journal of Sports Medicine, 27, 5, 658
Sept,
1999
PUBLICATION FORMAT: Magazine/Journal; Refereed ISSN: 0363-5465
LANGUAGE: English RECORD TYPE: Fulltext; Abstract TARGET AUDIENCE: Professional
WORD COUNT: 5200 LINE COUNT: 00448

...AUTHOR ABSTRACT: dogs were sacrificed and the replacement tissue was evaluated for gross and histologic appearance, amount, **glycosaminoglycan** content, and type II **collagen** immunoreactivity. Four weeks after instrumentation, both groups had lameness scores that were significantly higher than...

...Replacement tissue in grafted dogs closely resembled normal meniscal tissue with respect to chondroid differentiation, **collagen** content, and zonal architecture. Porcine small intestinal submucosa appeared to have beneficial effects on meniscal...

TEXT:
Meniscal injuries make up a significant number of cases seen by human and veterinary orthopaedic surgeons every year.(13,16,17,23,30) **Meniscal injuries** resulting from trauma, instability, or osteoarthritis can lead to destruction of articular cartilage and loss...

...and replacement by nonmeniscal tissue.(4,8,16,18,20,21,27,29) Currently, most **meniscal injuries** in dogs and humans are treated by partial or complete meniscectemy, or by suture repair...
... replacement tissue was considered less than ideal based on histologic appearance, the occurrence of articular **cartilage lesions**, and clinical dysfunction.(12) The lack of complete regeneration in a clinically timely manner suggests...

...serve as a scaffold and stimulus for the recruitment of cells for appropriate tissue regeneration. **Collagen**-based scaffolds have also been reported to promote meniscal regeneration in dogs.(27) Review of...placed in Hank's balanced salt solution and stored at -80 (degrees) C for subsequent **glycosaminoglycan** quantification. Sections of the medial meniscus from the unoperated stifle, as well as the previously...

...were performed.
Sections of replacement tissue were evaluated for histologic appearance, proteoglycan staining, and crosslinked **collagen** content and graded based on the following scale: 0, well-vascularized loose connective tissue, no...

...Unstained sections of replacement tissue and menisci were used for immunohistochemical assessment of type II **collagen** . Sections were deparaffinized and endogenous peroxidase quenching was performed using 3% hydrogen peroxide in water...
...Laboratories, Inc., Burlingame, California). A serum block was performed, and the primary antibody (rabbit antibovine **collagen** type II; Chemicon International, Inc., Temecula, California) was applied at a 1:1000 dilution for...

...dog number or treatment group to subjectively determine the presence and amount of positive staining.

Glycosaminoglycan Quantification

Total sulphated **glycosaminoglycan** content was determined by dimethylmethylene blue spectrophotometric assay.(14) Frozen samples were thawed and sections...

...4 hours. A 100-(micro)l aliquot of the digest solution was assayed for total **glycosaminoglycan** content by addition of 2.5 ml of dimethylmethylene blue solution and spectrophotometric determination of absorbance at 525 nm. Known concentrations of bovine **chondroitin sulfate** A were used to construct the standard curve. Total **glycosaminoglycan** content is reported in micrograms per milliliter per gram.

Statistical Analysis

All statistical analyses were...

...lameness scores, percentage of cross-sectional area and total surface area filling, histologic grade, and **glycosaminoglycan** content. Vertical impulse was chosen as the most appropriate ground-reaction force variable for comparison...tissue, a central zone of dense collagenous connective tissue with circumferentially, radially, and randomly oriented **collagen** fibers, and an axial area of fibrocartilage (Fig. 7, bottom). A superficial synovial-type lining...

...and no evidence of articular cartilage abnormality was noted.

(Figure 7 ILLUSTRATION OMITTED)

The mean **glycosaminoglycan** content of normal meniscal tissue was 2679 (+ or -) 271 (micro)g/(ml.g). Mean **glycosaminoglycan** content of the grafted dogs' replacement tissue was 1175 (+ or -) 66 (micro)g/(ml.g), and mean **glycosaminoglycan** content of control dogs' replacement tissue was 1526 (+ or -) 3 (micro)g/(ml.g). Mean **glycosaminoglycan** content of normal meniscal tissue was significantly (P (is less than) 0.001) higher than that of both grafted and control dogs' replacement tissue. Mean **glycosaminoglycan** content was not significantly different between the replacement tissue in grafted and control dogs.

Collagen type II was present in all samples of normal menisci (Fig. 8A). **Collagen** type II production was not present at detectable levels in replacement tissue from control dogs (Fig. 8B). **Collagen** type II was detected in all samples of replacement tissue from grafted dogs (Fig. 8C... of cells and matrix through its physical presence and chemotactic and mitogenic factors (that is, **platelet** -derived growth factor and fibronectin). Similarly, Stone et al.(27) demonstrated meniscal regeneration in 63% of dogs (15 of 24) with extensive (80%) meniscal defects replaced with copolymeric **collagen** scaffolds.

Meniscal regeneration has been reported to occur in the absence of exogenously derived support...

...enhancement of regeneration with respect to rate and quality is vital for appropriate treatment of **meniscal injuries** .

Porcine small intestinal submucosa appears to be a suitable material for induction of meniscal regeneration...

...use and refinement of this technique will allow for less variability and superior results.

The **glycosaminoglycan** content in the replacement tissue from both grafted and control dogs was significantly lower than that of normal menisci in this study. The lower **glycosaminoglycan** content is most likely a result of the relatively short duration of the study. If given more time

for tissue remodeling, **glycosaminoglycan** content of grafted dogs' replacement tissue would be expected to approach that of normal menisci. However, marked variability in measured **glycosaminoglycan** content of canine menisci has been reported as the result of dissection technique as well...

...grafted and control dogs. Only grafted dogs had evidence of chondroid differentiation with type II **collagen** production. Although type II **collagen** accounts for only approximately 1% to 2% of total meniscal **collagen** , it is an important and distinguishing feature of normal meniscal tissue? Therefore, we chose to assess **collagen** type II production as an indicator of appropriate meniscal differentiation and regeneration. All grafted dogs demonstrated appropriate zonal arrangement of tissue with axially located fibrocartilage containing type II **collagen** . Control dogs' replacement tissue was vascular without evidence of fibrocartilage or type II **collagen** . In addition, synovitis and articular **cartilage lesions** were present in the control dogs, indicating inappropriate regeneration resulting in irritation, inflammation, instability, or...

...and stimulus for cell and matrix regeneration. Porcine small intestinal submucosa contains multiple factors including **collagen** types I, III, IV, and VI, glycosaminoglycans, fibroblast growth factor, and transforming growth factor that...in the rabbit medial meniscus can occur spontaneously and is not improved by intra-articular **hyaluronic acid** . Vet Comp Orthop Traumatol 9: 60-65, 1996

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James L. Cook,(*)((dagger)) DVM, PhD...

21/3,K/2 (Item 2 from file: 149)

01818329 SUPPLIER NUMBER: 53728273 (USE FORMAT 7 OR 9 FOR FULL TEXT)

Articular Cartilage Repair.

Newman, Alan P.

The American Journal of Sports Medicine, 26, 2, 309(1)
March,
1998

PUBLICATION FORMAT: Magazine/Journal; Refereed ISSN: 0363-5465
LANGUAGE: English RECORD TYPE: Fulltext; Abstract TARGET AUDIENCE:
Professional
WORD COUNT: 15980 LINE COUNT: 01372

...AUTHOR ABSTRACT: successful repair or replacement of damaged articular cartilage should be similarly constituted. The response of **cartilage** to **injury** differs from that of other tissues because of its avascularity, the immobility of chondrocytes, and...
... is helpful to interpret researchers' claims in light of what we do know about articular **cartilage** structure, **injury** , and healing, as well as in comparison with the published results of other methods of...

...to its material properties, to joint lubrication, and to nutrition of the chondrocytes through diffusion.

Collagen

At least 90% to 95% of the **collagen** present in articular cartilage is Type II.(24,27) Type I **collagen** is found in bone, cornea, skin, meniscus, annulus fibrosis, and tendon, and Type II **collagen** is found in notochord and nucleus pulposus, as well as in hyaline cartilage. The latter tissues all have high proteoglycan and water contents, suggesting that the interaction between Type II **collagen** and proteoglycans promotes and maintains a hydrated matrix.

Proteoglycans

Proteoglycans exist either as monomers or as aggregates (Fig. 1) joined to **hyaluronic acid** filaments by means of specialized link proteins.(27-29) The proteoglycan monomers consist of a...

...in native articular cartilage.(22) Thus, proteoglycans in hyaline cartilage must be "compressed" by the **collagen** framework, and only partially hydrated.(24) In theory, damage to the **collagen** fibers would allow the proteoglycans to expand and absorb more water, causing the matrix to...

...phases: a fluid phase composed of water and electrolytes, and a solid phase consisting of **collagen** , proteoglycans, and other glycoproteins.(121,122) The close spacing between highly concentrated negatively charged groups...

...hyaline cartilage.(27,121,123,124) Under compression, interstitial fluid flows out of the permeable **collagen** -proteoglycan matrix, and when the load is removed, fluid flows back into the tissue. The...the thinnest, and forms the gliding surface of the joint. It is composed of thin **collagen** fibrils aligned parallel to the joint surface, with elongated, inactive chondrocytes directly subjacent. The middle zone is thicker than the superficial zone, with more spherical cells and with larger **collagen** fibrils that are not oriented in a parallel fashion. In the deep zone, the cells are spheroidal, arranged in a columnar orientation. The **collagen** fibers here are oriented in a parallel fashion, similar to the cells, vertical to the joint surface. In the zone of calcified cartilage, **collagen** fibrils insert into the calcified cartilage, providing both a mechanical transition from the cartilage to...
...of these regions, there is also variability in regard to the organization and content of **collagen** , proteoglycan, and water, depending on the distance from the cells.(24,27,141) Immediately around the chondrocytes (in the pericellular matrix), there is very little **collagen** , but abundant proteoglycans are present. Just outside this region (in the territorial matrix), the cells and their pericellular matrix are surrounded by a web of thin **collagen** fibrils that may provide cushioning or protection for the cells. Further away from the cell...

...cartilage is organized along lines that enable it to perform its mechanical function. The large **collagen** fibrils in this portion of the matrix are aligned according to their distance from the...

...be similarly constituted. There are a number of features (such as predominance of Type II **collagen** , water content, columnar orientation of

cells in the deep zone, bonding to the subchondral plate...

...of regenerated tissue. Although it is likely that many of the short-term symptoms of **cartilage lesions** can be alleviated by debridement or replacement (or both) with fibrocartilaginous material,(25,26) successful ...
...blood escapes from damaged blood vessels, forming a hematoma, and subsequently a clot is produced. **Platelets** trapped within the clot release various growth factors and cytokines, inducing the migration of pluripotential...

...replicating the function and structure of the original tissue.

Limitations of Cartilage

The response of **cartilage** to **injury** differs from this classic response because of two important features of the structure of cartilage... 108) The second difference is that the chondrocytes are literally imprisoned in a mesh of **collagen** and proteoglycan, unable to migrate to the injury site from adjacent healthy cartilage. Even if...

...they cannot get to where they are needed.

These conditions will be different if the **cartilage injury** penetrates through the subchondral plate, providing a pathway to the highly vascular bone.(108) In...

...itself after injury have typically followed two pathways, one detailing the events after a superficial **injury** to articular **cartilage** , and the other involving a deep, full-thickness injury through the subchondral bony plate.(22...
...tissue.(161) By 2 weeks, rounded chondrocytes appear and produce substantial amounts of Type II **collagen** . However, later in the process, there is still significant (20% to 35%) Type I **collagen** present,(30,64) the proteoglycan content decreases significantly, and the tangential **collagen** layers of the superficial zone fail to appear.(119) Furukawa et al.(64) speculate that...

...161) consistent with other experimental studies(18,49,172) of cartilage healing, is that the **collagen** fibrils of the repair tissue were not well integrated with those of the residual cartilage...

...mesenchymal stem cells. Synthetic gels and implants, such as carbon fiber pads, biodegradable matrices, and **collagen** gels have been used by themselves or as carriers for chondrocytes or growth-stimulating factors... the integrity of the surrounding articular surface, the age and weight of the patient, associated **meniscal** and ligamentous **lesions** , and a variety of other mechanical and biochemical factors.

Messner and Maletius(117) reported on...

...the Subchondral Plate

Surgeons have attempted to induce chondrogenesis in partial-thickness (or full articular **cartilage** thickness) **injuries** by penetrating the subchondral plate.(25,54,92,119,142,144,145) This introduces all... substantiated by multiple experimental observations that allograft chondrocytes embedded in a variety of substances, including **collagen** gels(173) and polyglycolic scaffolds,(55) do not provoke an immune response. Unfortunately, this does...results, and with repair tissue resembling hyaline cartilage. They observed an increase in Type II **collagen** and an increase in the shear modulus over time. In 1989, Homminga et al.(79...

...sheep knees, and found tissue that histologically resembled articular cartilage and contained 74% Type II **collagen** .(78)

There have been some promising preliminary clinical reports with perichondrial grafts. In 1990 Homminga...

...However, Moran et al.(120) noted abnormalities in the arrangement and distribution of Type II **collagen** and found some evidence of chondrocyte degeneration in the neocartilage (ghost cells, empty lacunae, and...

...allografts were obtained from adolescent donors, particularly in regard to the amount of Type II **collagen** produced.

There is very limited clinical experience with this technique. Lorentzon (unpublished data, 1996) has...

...and Shaffer(11) demonstrated that rabbit articular chondrocytes lost their ability to synthesize Type II **collagen** and cartilage-specific proteoglycans during serial monolayer culture but were able to reexpress the differentiated...the defect and direct their spatial distribution within the repair tissue, before their synthesis of **collagen** and proteoglycan. Given a material of suitable mechanical properties (shape-retaining but malleable), arthroscopic implantation...

...been investigated in regard to their ability to facilitate cartilage repair, including fibrinogen-based materials, **collagen** gels, carbon fiber pads, and polylactic and polyglycolic acid meshes.

Itay et al.(86) used...

...the biological resorbable immobilization vehicle, the same group later reported on the use of a **hyaluronic - acid** -based delivery substance, with a 75% success rate in resurfacing cartilage defects in chicken tibiotarsal ...

...consistent repair of the articular defects with a hyaline-like cartilage, containing 82% Type II **collagen** . Chu et al.(37) studied allogenic perichondrocyte-seeded PLA constructions in a rabbit model. The ...

...seamless peripheral attachment in some specimens, with an emerging zone of integration and evidence of **collagen** fibril continuity. However, the **collagen** was 81% Type I, compared with less than 1% Type I in normal rabbit articular cartilage.(64) Longer periods of observation may have yielded higher levels of Type II **collagen** , as other investigators have documented that the percentage of Type II **collagen** in repair tissue increases at greater time periods.(42,64)

In 1993, Freed et al...et al.(62) studied the effect of basic fibroblast growth factor on a chondrocyte-seeded **collagen** sponge scaffold implanted subcutaneously in nude mice. They found that the formation of mature cartilage...

...long history of interest in the transplantation of isolated chondrocytes to achieve the healing of **cartilage lesions** . Smith(163) isolated articular cartilage chondrocytes in 1965. Chesterman and Smith(35) performed experiments on...

...these cells produced a matrix similar to hyaline cartilage that was positive for Type II **collagen** . In subsequent studies, Aston and Bentley(4) used these cultured cells as allograft transplants into...

...Using polarized light microscopy, they showed that the matrix was composed "predominantly" of Type II **collagen** . Material properties of the repair tissue were not examined. Noguchi et al.(129) reported on...

...no subchondral bone was formed in their experimental model employing isolated allogenic chondrocytes embedded in **collagen** gel and subsequently implanted into osteochondral defects in rabbit knees. However, these investigators could find...

...characterized by a rapid increase in the number of chondrocytes and small amounts of extracellular **glycosaminoglycan** production. Between 4 and 8 weeks, the maturation stage takes over, and cartilage is formed...and colleagues also performed a quantitative analysis of the ratios of Types I and II **collagen** , Brittberg et al. did not take into account **collagen** type. The repair tissue appeared predominantly hyaline-like and most cells were in cluster formation...

...4 demonstrated a fibrocartilage appearance. Chondrocytes were present in lacunae. Immunohistochemical testing for Type II **collagen** was done in

five patients, and was positive in all five, but ratios or amounts of Types I and II **collagen** are not reported. The patellar transplants were followed from 24 to 66 months (mean, 36 Swedish study were small, and it is recognized that many partial-thickness articular **cartilage lesions** are nonprogressive, and that the natural history of some may be quite benign. Although historical...

...technique. Specifically, it would be helpful to know the ratios of Types I and II **collagen**, the quality of boundary healing at the junction of normal and repair tissue, and the...

...mechanical behavior. It is the maintenance of the structural properties of the solid phase (the **collagen** fibrils, proteoglycans, and glycoproteins) that determines its longevity. Any tissue intended to replace the hyaline...

...that it has been so difficult to cultivate the correct environment for healing of articular **cartilage lesions** . The standard method of treating cartilage defects to date has been to bring in new...Nature 230: 385-388, 1971

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21/3,K/3 (Item 3 from file: 149)
DIALOG(R)File 149:TGG Health&Wellness DB(SM)

01352372 SUPPLIER NUMBER: 12019305 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Osteoarthritis. (epidemiology, pathophysiology, diagnosis, and treatment)
Swedberg, Jay A.; Steinbauer, Jeffrey R.
American Family Physician, v45, n2, p557(12)
Feb,
1992
PUBLICATION FORMAT: Magazine/Journal ISSN: 0002-838X LANGUAGE: English
RECORD TYPE: Fulltext; Abstract TARGET AUDIENCE: Professional
WORD COUNT: 3027 LINE COUNT: 00349

... in the proteoglycan concentration, possible alterations in the size and aggregation of proteoglycans, alteration in **collagen** fibril size and weave, and increased synthesis and degradation of matrix macromolecules. Therapeutically, the disease...

...12]
The reparative process is stimulated by various growth factors released from osteophytes in cartilage, **platelets** and lymphocytes and by growth factors found in serum [7,13] (Table 1). These growth factors act by inducing the proliferation of chondrocytes and the synthesis of proteoglycans and **collagen** . [13,14] Some growth factors, such as transforming growth factor-beta, may also increase the...of proteases cleave protein from proteoglycan molecules, resulting in products that no longer bind to **hyaluronic acid** to form normal proteoglycan aggregates (Figure 10).
Collagenases break down **collagen** , which acts as a structural framework to contain the proteoglycan. Disrupted **collagen** allows proteoglycan, which is very hydrophilic, to expand as it soaks up more water, further...

...the cartilage. The amount of water in cartilage is dependent on the integrity of the **collagen** meshwork structure. As the cartilage deteriorates, components of the cartilage matrix (proteoglycan
TABLE2
Changes in...

...Aging	Osteoarthritis
Proteoglycan concentration	Normal or low normal / Decreased
Water content	Decreased / Increased
Synthesis of **collagen** and proteoglycanases	Decreased / Increased

Sections of regenerating tendons differed remarkably...

...erythrocytes (Figs. 3-5). In addition, there was an abundance of monocytes, eosinophils, neutrophils, lymphocytes, **platelets** , and macrophages. **Platelets** and monocytes were usually found within the vicinity of several masses of fibrin, some of...

...aggregates of large lipid droplets and adipocytes were seen, as were some blood vessels and **collagen** fibrils. These fibrils were sparse and scattered, but had the alternating dark and light bands of mature fibrils (Fig. 3). In comparison with older fibrils, newly synthesized **collagen** fibrils have smaller and less variable maximum fiber cross-sectional areas (Table).[63-69]

By...deeply indented at several points.

Sections of 15-day neotendons also contained monocytes and macrophages; **platelets** and lymphocytes were rare. Other observations made on these sections were essentially the same as...

...the 15-day specimens, their cytoplasm contained extensively developed rER. There was an abundance of **collagen** fibrils in sections of 18-day neotendons (Fig. 12). Previous morphometric measurements showed that these fibrils were also larger than those of 12-day neotendons.[69] These **collagen** subunits were not much different in sections of 21-day neotendons; however, grouping of fibrils...

...granulation), tendons require at least three separate, but related, processes: 1) cell (fibroblast) proliferation, 2) **collagen** fibril synthesis, and 3) alignment of fibrils with the longitudinal axis of the tendon. Because tendons are 86% **collagen** by dry weight,[73] the latter two processes must play a dominant role during healing...

...developed rER, and prominent Golgi complexes correlates very well with the increasingly larger amounts of **collagen** fibrils in the extracellular compartment.

The abundance of ground substance in the seven-day neotendons...

...inflammation is massive and prolonged, lasting at least five days postinjury. Monocytes, eosinophils, neutrophils, lymphocytes, **platelets** , and macrophages abound during the initial few days of healing, but become increasingly rare as...

...of the tendon, assuming spindle shapes and developing a few cytoplasmic strands simultaneously as the **collagen** fibrils are also oriented longitudinally. These findings have also been reported by others.(

) Newly synthesized **collagen** fibrils may be seen in the extracellular compartment as early as five days after surgery, but these **collagen** subunits are sparse ...the fibrils are very numerous in this compartment. Organization of these fibrils into bundles of **collagen** becomes easily discernible by the 21st postoperative day. Thus, the initial three weeks of healing...

...shown that the increase in tensile strength is accompanied by corresponding morphological changes in the **collagen** matrix,[89] thus suggesting the need to apply such stress during fibrillogenesis.

Preliminary evidence also...J Orthop Res 2:39-48, 1984 [41]Holm-Pederson P, Viidik A: Maturation of **collagen** in healing wounds in young and old rats. Scand J Plast Reconstr Surg 6:16 172, 1986 [55]Koob JJ, Vogel KG: Site-related variations in **glycosaminoglycan** content and swelling properties of bovine flexor tendon. J Orthop Res 5:414-424, 1987 ...

...49, 1967 [59]Postacchini F, De Martino C: Regeneration of rabbit calcaneal tendon: Maturation of **collagen** and elastic fibers following partial tenotomy. Connect Tissue Res 8:41-47, 1980 [60]Postacchini...

...25:407-408, 1965 [63]Parry DAD, Craig AS: Quantitative electron microscopic observations of the **collagen** fibrils in rat-tail tendon.

Biopolymers 16:1015-1031, 1977 [64]Parry DAD, Barnes GRG, Craig AS: A comparison of the size distribution of **collagen** fibrils in connective tissue as a function of age and a possible relation between fibril...

...DAD, Craig AS, Barnes GRG: Tendon and ligament from the horse: An ultrastructural study of **collagen** fibrils and elastic fibres as a function of age. Proc R Soc Lond [Biol] 203...

...Biochem J 204:61-67, 1982 [68]Flint MH, Craig AS, Reilly HC, et al: **Collagen** fibril diameters and **glycosaminoglycan** content of skins: Indices of tissue maturity and function. Connect Tissue Res 13:69-81, 1984 [69]Enwemeka CS: The effects of early function on **collagen** fibril populations in regenerating tendons. Abstract. FASEB J 2:1587, 1988 [70]Goldberg B, Green H: An analysis of **collagen** secretion by established mouse fibroblast lines. J Cell Biol 22:227-258, 1964 [71]Slack...

...61 [73]Williams IF: Cellular and biochemical composition of healing tendon. In Jenkins DHR (ed): **Ligament Injuries** and Their Treatment. Rockville, MD, Aspen Publishers Inc, 1985, pp 43-57 [74]O'Donoghue...

...NY, Plenum Publishing Corp, 1981, pp 259-294 [79]Flint M: Interrelationships of mucopolysaccharide and **collagen** in connective tissue remodelling. J Embryol Exp Morphol 27:481-495, 1972 [80]Scott JE, Hughes EW: Proteoglycan **collagen** relationships in developing chick and bovine tendons: Influence of the physiological environment. Connect Tissue Res 14:267-278, 1986 [81]McGaw WT: The effect of tension on **collagen** remodelling by fibroblasts: A stereological ultrastructural study. Connect Tissue Res 14:229-235, 1986 [82...

...the rabbit. Hand 14:17-20, 1982 [84]Popspisilova J, Rottova A: Ultrasonic effect on **collagen** synthesis and deposition in differently localized experimental granulomas. Acta Chir Plast 19:148-157, 1977...
...GC, Reilly HC, Bell-Booth PG, et al: The influence of mechanical forces on the **glycosaminoglycan** content of the rabbit flexor digitorum profundus tendon. Connect Tissue Res 7:37-46, 1979...
CAPTIONS: Mean cross-sectional area of **collagen** fibrils. (table)

21/3,K/6 (Item 2 from file: 444)
DIALOG(R)File 444:New England Journal of Med.

00101088

Burns (Medical Progress)

Demling, Robert H.
The New England Journal of Medicine
November 28, 1985; 313 (22),pp 1389-1398
LINE COUNT: 00717 WORD COUNT: 09904

TEXT
...reported that this factor is a polypeptide that is biochemically similar to a fragment of **collagen** released by the injured skin...hypermetabolic state is developing and the wound is becoming inflamed (Ref. 79). Although neutrophil and **platelet** sequestration in the microvessels of burned tissue is evident immediately, major tissue infiltration with neutrophils ...

...79,80). These inflammatory cells are potent factories of vasoactive substances such as prostanoids, leukotrienes, **platelet** -activating factors, and complement components. When the wound mediators are released and absorbed in sufficient...of oxygen is increased. This growth factor stimulates fibroblast mitosis and subsequent fibroblast deposition of **collagen** fibronectin and **glycosaminoglycan** (Ref. 85). The rate of fibroblast proliferation and secretion depends on the availability of

oxygen...

...rate of healing. Angiogenesis in the wound surface by necessity precedes the subsurface fibroplasia and **collagen** deposition. **Platelet** -derived growth factor has properties of both angiogenesis factor and macrophage-derived growth factor (Ref...

...dermal elements are covered within two weeks. The initial hyperplasia of dermal fibroblasts responsible for **collagen** and ground-substance deposition then begins to resolve, and healing is completed with only minimal amounts of excess wound **collagen** . The histology of this process changes dramatically, however, if closure is not completed in two...

...which results in vasodilatation and a hyperemic scar. These cells also produce an increase in **chondroitin sulfate** A, a substance usually found in firm tissues such as **cartilage** , so that the **wound** becomes harder and less pliable. As the myofibroblasts contract, thereby shortening the scar, the deposition of the mucopolysaccharides, **chondroitin sulfate** A, and ground substances produces a fusion of the **collagen** fibers in the contracted state (Ref. 91-95). The end result is a raised, firm...

...hyperemia and the deposition of new scar tissue. Within several weeks, a decrease in the **chondroitin sulfate** content is evident, ...bonding is made of a flexible bilayer membrane, composed of silicone and nylon, on which **collagen** peptides are bonded (Ref. 111). The **collagen** on the dressing is chemically bonded by fibrin to the **collagen** on the wound. Although useful when only minor infection is present, these synthetic dressings adhere...with a temporary top layer of Silastic and a bottom layer made of a biodegradable **collagen - glycosaminoglycan** network that is covalently crosslinked and porous (Ref. 116,117). The combination of **collagen** and **glycosaminoglycan** is used in an attempt to avoid the inflammatory reaction produced by **collagen** alone while providing a three-dimensional template or scaffolding for neodermis formation. Mesenchymal cells should...

...new approach (still in the developmental stage) in which basal epidermal cells are seeded within **collagen - glycosaminoglycan** membrane before placement of the bilayer membrane on the excised wound. These cells should then...

CITED REFERENCES

...86. Hunt TK, Pai MP. Effect of varying ambient oxygen tensions on wound metabolism and **collagen** synthesis. Surg Gynecol Obstet 1972; 135:561-67.

87. Knighton DR, Hunt TK, Thakral KK, Goodson WH III. Role of **platelets** and fibrin in the healing sequence: an in vivo study of angiogenesis and **collagen** synthesis. Ann Surg 1982; 196:379-88.

88. Alvarez OM, Mertz PM, Eaglstein WH. The effect of occlusive dressings on **collagen** synthesis and reepithelialization in superficial wounds. J Surg Res 1983; 35:142-8.

89. Sporn...

...35. 109. Thornton JW, Taves MJ, Harney JH, et al. Graft adherence to wound surfaces: **collagen** fibrin interactions. Burns 1978; 3:23-9.

110. Chvapil M. Considerations on manufacturing principles of...

Degradation enzymes such as proteoglycanases and	Normal or low normal...	Increased

...Normal Decreased

Growth factors	Normal low normal	Increased
Proteoglycan aggregation (proteoglycan interaction with **hyaluronic acid**)	Normal	Decreased

and **collagen** subunits) enter the synovial fluid, which further stimulates the synovium to synthesize and release interleukin...as rheumatoid arthritis or gout and infections such as septic arthritis or Lyme disease. Traumatic **injury** resulting in **intra - articular** fractures or ligamentous instability also must be considered. If recognized early, osteoarthritis secondary to these...

...toxins. Cyclic motion and load bearing are essential for chondrocyte survival and normal proteoglycan and **collagen** synthesis. Just as weight bearing is necessary for proper cartilage function, adequate rest beween activities...clinical applications. JAMA 1989;262:938-41.

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[16...

...K. Tajiri K, Sai S, Tanaka T, Murota K. Effects of nonsteroidal antiinflammatory drugs on **collagen** biosynthesis of cultured chondrocytes. Semin Arth Rheum 1989;18(3 Suppl 1):16-8.

[32...

21/3,K/4 (Item 4 from file: 149)

01194033 SUPPLIER NUMBER: 08212343 (USE FORMAT 7 OR 9 FOR FULL TEXT)

Inflammation, cellularity, and fibrillogenesis in regenerating tendon: implications for tendon rehabilitation.

Enwemeka, Chukuka S.
Physical Therapy, v69, n10, p816(10)
Oct,
1989
PUBLICATION FORMAT: Magazine/Journal ISSN: 0031-9023 LANGUAGE: English
RECORD TYPE: Fulltext TARGET AUDIENCE: Professional
WORD COUNT: 6183 LINE COUNT: 00521

... fibroplasia and fibrillogenesis, and 3) a third period of progressive alignment and organization of the **collagen** fibrils into bundles that were oriented in the longitudinal axis of the tendon. Although healing...electron microscope were used to evaluate healing.

Computer Morphometry

Regardless of healing period, newly produced **collagen** fibrils were clearly smaller and less variable in cross-sectional area than the fibrils of...

...from this group.

Results

The normal rabbit Achilles tendon consisted of closely packed bundles of **collagen** fibrils with relatively few fibroblasts and elastin bundles (Figs. 1, 2). Only in the lumen...

...were generally stellate in shape with a few cytoplasmic strands running between adjacent bundles of **collagen** . Fibroblast nuclei, remarkably varied in shape, were consistently prominent and large with several aggregates of chromatin along the inner surface of the nuclear membrane. In longitudinal section, **collagen** fibrils were striated with distinct light and dark bands.

File 348:EUROPEAN PATENTS 1978-2003/Jan W04
(c) 2003 European Patent Office
File 349:PCT FULLTEXT 1979-2002/UB=20030116,UT=20030109
(c) 2003 WIPO/Univentio

Set	Items	Description
S1	2	AU='MURRAY MARTHA MEANEY'
S2	2	AU='MURRAY MICHAEL'
S3	4	AU='MARLER JENNIFER'
S4	0	S1 AND S2 AND S3
S5	8	S1:S3

```
File 350:Derwent WPIX 1963-2002/UD,UM &UP=200304
         (c) 2003  Thomson Derwent
File 347:JAPIO Oct 1976-2002/Sep(Updated 030102)
         (c) 2003 JPO & JAPIO
File 371:French Patents 1961-2002/BOPI 200209
         (c) 2002 INPI.  All rts. reserv.

Set     Items   Description
S1          4   AU='MURRAY M M'
S2          3   AU='MURRAY M F'
S3          6   AU='MARLER J'
S4          1   S1 AND S2 AND S3
S5         10   S1:S3 NOT S4
```

4/7/1 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX

013628069 **Image available**
WPI Acc No: 2001-112277/200112

Biological scaffold for repairing injured extra-articular tissue, comprises inductive core and adhesive zone which binds the scaffold with ruptured tissue, for fixing core and ruptured tissue

Patent Assignee: BRIGHAM & WOMENS HOSPITAL INC (BGHM); MARLER J (MARL-I); MURRAY M F (MURR-I); MURRAY M M (MURR-I)
Inventor: **MURRAY M M ; MARLER J ; MURRAY M F**

Number of Countries: 094 Number of Patents: 004
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200078370	A1	20001228	WO 2000US17069	A	20000621	200112	B
AU 200057548	A	20010109	AU 200057548	A	20000621	200122	
EP 1191955	A1	20020403	EP 2000943011	A	20000621	200230	
			WO 2000US17069	A	20000621		
US 20020123805	A1	20020905	US 99140197	A	19990622	200260	
			US 2000182972	A	20000216		
			US 2000594295	A	20000615		
			US 2001917058	A	20010727		

Priority Applications (No Type Date): US 2000140197 A 20000615; US 99140197 P 19990622; US 2000182972 P 20000216; US 2000594295 A 20000615; US 2001917058 A 20010727
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200078370	A1	E	86	A61L-027/24	
Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW					
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW					
AU 200057548	A			A61L-027/24	Based on patent WO 200078370
EP 1191955	A1	E		A61L-027/24	Based on patent WO 200078370
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI					
US 20020123805	A1			A61F-002/08	Provisional application US 99140197
					Provisional application US 2000182972
					CIP of application US 2000594295

Abstract (Basic): WO 200078370 A1

NOVELTY - A biologic replacement comprises an inductive core surrounded by an adhesive zone. The inductive core facilitates cell migration, proliferation and tissue growth in the gap between the ruptured intra-articular tissue. The adhesive zone by bonding the replacement clot and ruptured tissue, binds the core and ruptured tissue.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) A method for using the biologic replacement to repair a tissue involves exposing tissue proteins in the torn edges of the tissue, introducing the replacement between torn edges and forming a bond between the tissue proteins and the materials in the biologic replacement; and

(2) Use of biologic replacement for repair of injured extra-articular tissue.

USE - Useful in repairing injured extra-articular tissue (claimed) for treating anterior cruciate ligament injuries to players during basketball, soccer and volleyball. The device is also useful for treating orthopedic surgery patients to treat ruptured anterior cruciate ligament, torn knee meniscus or to regenerate cartilage after injury.

ADVANTAGE - The device effectively promotes regeneration of human anterior cruciate ligament, maintains the complex insertion size and fan-shape of the ligament, preserves proprioceptive fibers within the ligament. The device helps to heal tissue by migration of fibroblast into the scaffold and wound closure is enhanced by the contractile cells. The method is less invasive in comparison to the current techniques which involves drilling the bone. The surgery is faster, involves no donor site morbidity, ensures quicker healing time, effective restoration of normal functioning of ligaments and meniscal structure of articular cartilage structure. The implantation of the device eliminates the waiting time for ex vivo cell culture, does not require local nutritional source and blood supply and prevents re-implantation.

The bio-degradable synthetic scaffold helps to control the rate of degradation of regenerated ligaments. The cross-linked collagen-based scaffold has excellent strength, biocompatibility, resorption rate and maintains the antigenicity of the biomaterials. The method does not involve graft harvest, maintains the complex fascicular structure of the anterior cruciate ligament. The treatment is particularly beneficial for women engaged in military training and women athletes. The device has long shelf life.

DESCRIPTION OF DRAWING(S) - The figure shows the schematic drawing of bonding a replacement clot between the fibers.

pp; 86 DwgNo 2/19

Derwent Class: A96; D22; P32; P34
International Patent Class (Main): A61F-002/08; A61L-027/24
International Patent Class (Additional): A61F-002/02; A61L-024/10; A61L-027/38

5/26,TI/1 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX

014876101
WPI Acc No: 2002-696807/200275
Proximity sensor has omega-shaped core into which calibration bolt in connection with sensing coil, is inserted to adjust electrical signal in sensing coil

5/26,TI/2 (Item 2 from file: 350)
DIALOG(R)File 350:Derwent WPIX

014446821
WPI Acc No: 2002-267524/200231
High-throughput screening assay, useful for identifying pharmaceutical compounds, involves measuring the effect of a test compound on a characteristic of a selected microorganism culture

5/26,TI/3 (Item 3 from file: 350)
DIALOG(R)File 350:Derwent WPIX

014085964
WPI Acc No: 2001-570178/200164
Inductive proximity sensor for detecting ferromagnetic, non-permeable or magnetic targets, has sensing coil positioned around leg portions of core

5/26,TI/4 (Item 4 from file: 350)
DIALOG(R)File 350:Derwent WPIX

013145367
WPI Acc No: 2000-317239/200027
Task coordinating method for add-on and core software

5/26,TI/5 (Item 5 from file: 350)
DIALOG(R)File 350:Derwent WPIX

012841192
WPI Acc No: 2000-013024/200001
Altering superficial shape of patient's modification site

5/26,TI/6 (Item 6 from file: 350)
DIALOG(R)File 350:Derwent WPIX

012551455
WPI Acc No: 1999-357562/199930
Cell containing implant comprising polymeric matrix and dissociated cells to form hybrid tissue

5/26,TI/7 (Item 7 from file: 350)
DIALOG(R)File 350:Derwent WPIX

012423118
WPI Acc No: 1999-229226/199919
Novel compounds or complexes comprising at least two moieties, each

comprising two or more fused thiophenes useful in electric, electronic and optoelectronic components and devices

5/26,TI/8 (Item 8 from file: 350)
DIALOG(R)File 350:Derwent WPIX

012253099
WPI Acc No: 1999-059206/199905
High conductance surge cable - has electrically conductive foil strip electrically attached to a wire and both covered by insulating material

5/26,TI/9 (Item 9 from file: 350)
DIALOG(R)File 350:Derwent WPIX

007672889
WPI Acc No: 1988-306821/198843
Perforating gun automatic release mechanism - gun is connected via releasable coupling activated by detonation of gun

5/26,TI/10 (Item 10 from file: 350)
DIALOG(R)File 350:Derwent WPIX

003154808
WPI Acc No: 1981-15350D/198109
Cotton analysis appts. - has sample chamber with bottom dust trap filter and with tangential and radial cyclone air jets

5/6/1 (Item 1 from file: 348)
01249179
BIOLOGIC REPLACEMENT FOR FIBRIN CLOT FOR INTRA-ARTICULAR USE
BIOLOGISCHER ERSATZ FUR FIBRINCLOTS ZUR VERWENDUNG IN GELENKEN
REMPLACEMENT BIOLOGIQUE D'UN CAILLOT DE FIBRINE A USAGE INTRA-ARTICULAIRE
LANGUAGE (Publication,Procedural,Application): English; English; English

5/6/2 (Item 2 from file: 348)
01099339
SOFT TISSUE RECONSTRUCTOR AND METHOD OF USE
VORRICHTUNG ZUR WIEDERHERSTELLUNG VON WEICHGEWEBE SOWIE IHR GEBRAUCHSVERFAHREN
DISPOSITIF DE RECONSTRUCTION DES TISSUS MOUS ET SON PROCEDE D'UTILISATION
LANGUAGE (Publication,Procedural,Application): English; English; English

5/6/3 (Item 3 from file: 348)
01055792
HYBRID TISSUES FOR TISSUE ENGINEERING
TISSUS HYBRIDES SERVANT A EFFECTUER UNE RECONSTRUCTION TISSULAIRE
LANGUAGE (Publication,Procedural,Application): English; English; English

5/6/4 (Item 4 from file: 348)
00862024
EXTRACTION SYSTEM AND METHOD
EXTRAKTIONSVERFAHREN UND VORRICHTUNG
SYSTEME ET PROCEDE D'EXTRACTION
LANGUAGE (Publication,Procedural,Application): English; English; English

5/6/5 (Item 1 from file: 349)
00765274 **Image available**
BIOLOGIC REPLACEMENT FOR FIBRIN CLOT FOR INTRA-ARTICULAR USE
REMPLACEMENT BIOLOGIQUE D'UN CAILLOT DE FIBRINE A USAGE INTRA-ARTICULAIRE
Publication Language: English
Filing Language: English
Fulltext Availability:
Detailed Description
Claims
Fulltext Word Count: 28258
Publication Year: 2000

5/6/6 (Item 2 from file: 349)
00519812 **Image available**
SOFT TISSUE RECONSTRUCTOR AND METHOD OF USE
DISPOSITIF DE RECONSTRUCTION DES TISSUS MOUS ET SON PROCEDE D'UTILISATION
Publication Language: English
Fulltext Availability:
Detailed Description
Claims
Fulltext Word Count: 13355
Publication Year: 1999

5/6/7 (Item 3 from file: 349)
00494044
HYBRID TISSUES FOR TISSUE ENGINEERING
TISSUS HYBRIDES SERVANT A EFFECTUER UNE RECONSTRUCTION TISSULAIRE
Publication Language: English
Fulltext Availability:
Detailed Description
Claims
Fulltext Word Count: 7553
Publication Year: 1999

5/6/8 (Item 4 from file: 349)
00377550 **Image available**
EXTRACTION SYSTEM AND METHOD
SYSTEME ET PROCEDE D'EXTRACTION
Publication Language: English
Fulltext Availability:
Detailed Description
Claims
Fulltext Word Count: 5494
Publication Year: 1997
?t5/3,ab/1,2,3,5,6,7

5/3,AB/1 (Item 1 from file: 348) duplicate
DIALOG(R)File 348:EUROPEAN PATENTS

01249179
BIOLOGIC REPLACEMENT FOR FIBRIN CLOT FOR INTRA-ARTICULAR USE
BIOLOGISCHER ERSATZ FUR FIBRINCLOTS ZUR VERWENDUNG IN GELENKEN
REMPLACEMENT BIOLOGIQUE D'UN CAILLOT DE FIBRINE A USAGE INTRA-ARTICULAIRE
PATENT ASSIGNEE:
THE BRIGHAM AND WOMEN'S HOSPITAL, INC., (351462), 75 Francis Street, Boston, MA 02115, (US), (Applicant designated States: all)
INVENTOR:
MURRAY, Martha, Meaney , 238 North Street, Stoneham, MA 02180, (US
LEGAL REPRESENTATIVE:
Ritter, Stephen David et al (35281), Mathys & Squire 100 Gray's Inn Road, London WC1X 8AL, (GB)
PATENT (CC, No, Kind, Date): EP 1191955 A1 020403 (Basic)
WO 200078370 001228
APPLICATION (CC, No, Date): EP 2000943011 000621; WO 2000US17069 000621
PRIORITY (CC, No, Date): US 140197 P 990622; US 182972 P 000216; US 594295 P 000615
DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI; LU; MC; NL; PT; SE
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI
INTERNATIONAL PATENT CLASS: A61L-027/24; A61L-027/38; A61L-024/10
NOTE:
No A-document published by EPO
LANGUAGE (Publication,Procedural,Application): English; English; English

5/3,AB/2 (Item 2 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS

01099339
SOFT TISSUE RECONSTRUCTOR AND METHOD OF USE
VORRICHTUNG ZUR WIEDERHERSTELLUNG VON WEICHGEWEBE SOWIE IHR GEBRAUCHSVERFAHREN
DISPOSITIF DE RECONSTRUCTION DES TISSUS MOUS ET SON PROCEDE D'UTILISATION
PATENT ASSIGNEE:
Reprogenesis, Inc, (2574740), 21 Erie Street, Cambridge, MA 02139, (US), (Applicant designated States: all)
Beth Israel Deaconess Medical Center, (2248853), 169 Pilgrim Road, Boston, MA 02115, (US), (Applicant designated States: all)
INVENTOR:
BORLAND, Kermit, M., 43 Park Street, Shrewsbury, MA 01545, (US)
MARLER, Jennifer , 3 Wyman Terrace, Arlington, MA 02174, (US
PATENT (CC, No, Kind, Date):
WO 9951164 991014
APPLICATION (CC, No, Date): EP 99912925 990329; WO 99US6745 990329
PRIORITY (CC, No, Date): US 80545 P 980403
DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI; LU; MC; NL; PT; SE

INTERNATIONAL PATENT CLASS: A61F-002/00; A61K-047/00; A61L-027/00;
A61M-005/42; A61B-019/00
LANGUAGE (Publication,Procedural,Application): English; English; English

5/3,AB/3 (Item 3 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS

01055792
HYBRID TISSUES FOR TISSUE ENGINEERING
TISSUS HYBRIDES SERVANT A EFFECTUER UNE RECONSTRUCTION TISSULAIRE
PATENT ASSIGNEE:
THE REGENTS OF THE UNIVERSITY OF MICHIGAN, (1929032), Wolverine Tower, Room 2071, 3003 South State Street, Ann Arbor Mi 48109-1280, (US), (Applicant designated States: all)
UNIVERSITY OF MASSACHUSETTS MEDICAL CENTER, (1387111), 55 Lake Avenue North, Worcester, MA 01655, (US), (Applicant designated States: all)
CHARLOTTE-MECKLENBURG HOSPITAL doing business as Carolinas Medical Center , (2165461), P.O. Box 32861, Charlotte, NC 28232-2861, (US), (Applicant designated States: all)
Beth Israel Deaconess Medical Center, (2248853), 169 Pilgrim Road, Boston, MA 02115, (US), (Applicant designated States: all)
INVENTOR:
MOONEY, David, J., 3657 Huron Court, Ann Arbor, MI 48103, (US)
KIM, Byung-Soo, 1762 Mcintyre Drive, Ann Arbor, MI 48105, (US)
BROWN, Andrea, N., Apartment L, 410 Blue Silk Road, Gaithersburg, MD 20879-3618, (US)
HALBERSTADT, Craig, R., 9416 Hampton Oaks Lane, Charlotte, NC 28270, (US)
VACANTI, Chuck, 5 Bushuell Drive, Lexington, MA 02173, (US)
MARLER, Jennifer , 3 Wyman Terrace, Arlingon, MA 02174, (US
PATENT (CC, No, Kind, Date): WO 9925396 990527
APPLICATION (CC, No, Date): WO 98960229 981117; WO 98US24409 981117
PRIORITY (CC, No, Date): US 66926 971117
DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI; LU; MC; NL; PT; SE
INTERNATIONAL PATENT CLASS: A61L-027/00
LANGUAGE (Publication,Procedural,Application): English; English; English

5/3,AB/5 (Item 1 from file: 349) duplicate
DIALOG(R)File 349:PCT FULLTEXT

00765274
BIOLOGIC REPLACEMENT FOR FIBRIN CLOT FOR INTRA-ARTICULAR USE
REMPLACEMENT BIOLOGIQUE D'UN CAILLOT DE FIBRINE A USAGE INTRA-ARTICULAIRE
Patent Applicant/Assignee:
THE BRIGHAM AND WOMEN'S HOSPITAL INC, 75 Francis Street, Boston, MA 02115 , US, US (Residence), US (Nationality), (For all designated states except: US)
Patent Applicant/Inventor:
MURRAY Martha Meaney , 238 North Street, Stoneham, MA 02180, US, US (Residence), US (Nationality), (Designated only for: US
Legal Representative:
ELRIFI Ivor R, Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P. C., One Financial Center, Boston, MA 02111, US
Patent and Priority Information (Country, Number, Date):
Patent: WO 200078370 A1 20001228 (WO 0078370)
Application: WO 2000US17069 20000621 (PCT/WO US0017069)
Priority Application: US 99140197 19990622; US 2000182972 20000216
Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
(EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 28258

English Abstract
This invention provides a 3-D scaffold composition for repairing a ruptured anterior cruciate ligament and a method for attaching the composition to the ruptured anterior cruciate ligament. The scaffold has an inductive core and an adhesive zone. After the scaffold composition is inserted into the region between the torn ends of the anterior cruciate ligament and adhesively attached to the ends of the ligament, the adhesive zone provides a microenvironment for inducing fibroblast cells from the anterior cruciate ligament to migrate into the inductive core. After migrating into the inductive core, the fibroblast cells conform to the collagen structure between the ligament and heal the gap between the ruptured ends. The invention also includes the use of a collagen-based glue as an adhesive to maintain contact between the torn edges of the meniscus and the use of a collagen-based scaffold as an adhesive (as well as a cell migration inducer) to maintain and restore contact between the torn cartilage and the surrounding cartilage and bone.

French Abstract
L'invention concerne, d'une part, une structure de support tridimensionnelle permettant de reparer un ligament croise anterieur dechire et, d'autre part, un procede permettant de fixer cette structure audit ligament. La structure de support est pourvue d'un noyau inductif et d'une zone adhesive. Apres insertion de la structure support dans la region situee entre les extremites dechirees du ligament croise anterieur et apres fixation par collage auxdites extremites, la zone adhesive procure un micro-environnement permettant de produire des fibroblastes a partir du ligament croise anterieur qui migrent dans le noyau inductif. Apres leur migration dans le noyau inductif, les fibroblastes s'associent a la structure collagene situee entre les ligaments et referment l'espace vide entre les extremites dechirees. L'invention concerne egalement l'utilisation d'une colle a base de collagene comme adhesif permettant de maintenir le contact entre les bords dechires du menisque ; et l'utilisation d'une structure de support a base de collagene comme adhesif (ainsi que comme inducteur de migration des cellules) permettant de maintenir et de retablir le contact entre le cartilage dechire et le cartilage et l'os qui sont autour.

5/3,AB/6 (Item 2 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00519812
SOFT TISSUE RECONSTRUCTOR AND METHOD OF USE
DISPOSITIF DE RECONSTRUCTION DES TISSUS MOUS ET SON PROCEDE D'UTILISATION
Patent Applicant/Assignee:
REPROGENESIS INC,
BETH ISRAEL-DEACONESS MEDICAL CENTER,
BORLAND Kermit M,
MARLER Jennifer,
Inventor(s):
BORLAND Kermit M,
MARLER Jennifer
Patent and Priority Information (Country, Number, Date):
Patent: WO 9951164 A1 19991014
Application: WO 99US6745 19990329 (PCT/WO US9906745)
Priority Application: US 9880545 19980403
Designated States: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA

UG US UZ VN YU ZW GH GM KE LS MW SD SL SZ UG ZW AM AZ BY KG KZ MD RU TJ
TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI
CM GA GN GW ML MR NE SN TD TG
Publication Language: English
Fulltext Word Count: 13355

English Abstract
This invention is directed to methods of tissue reconstruction and kits and apparatus for the practice of the method. In the method, an injection means, which may be a hollow tube, is positioned intradermally, subdermally, or subcutaneously beneath a soft tissue defect. A tissue shaping means is positioned on top of a soft tissue defect. Conformation means is applied to conform the soft tissue defect to the shape of the tissue shaping means. Then a biocompatible material which may optionally comprise living cells is injected into a subcutaneous location to treat the soft tissue defect. A soft tissue reconstructor comprising the surface shaping means, the injection means, and the conformation means is described to facilitate the practice of the method. Further, a kit, which optionally includes a biocompatible material for injection, is described.

French Abstract
Cette invention porte sur des procedes de reconstruction des tissus mous, ainsi que sur des kits et un appareil permettant de mettre en oeuvre ce procede. Selon ce procede, un dispositif d'injection, de type tube creux, est positionne de maniere intradermique, sous-dermique ou sous-cutanee au-dessous d'un tissu mou anormal. Un dispositif de mise en forme du tissu est positionne sur le dessus d'un tissu mou anormal. Un dispositif de conformation est applique de sorte que le tissu mou anormal epouse la forme du dispositif de mise en forme. Une substance biocompatible pouvant eventuellement renfermer des cellules vivantes est ensuite introduite dans un emplacement sous-cutane de facon a traiter le tissu mou anormal. L'invention porte egalement sur un dispositif de reconstruction des tissus mous qui comprend le dispositif de mise en forme, le dispositif d'injection et le dispositif de conformation, et qui facilite la mise en oeuvre de ce procede. L'invention porte, en outre, sur un kit comprenant eventuellement une substance biocompatible destinee a etre injectee.

5/3,AB/7 (Item 3 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00494044
HYBRID TISSUES FOR TISSUE ENGINEERING
TISSUS HYBRIDES SERVANT A EFFECTUER UNE RECONSTRUCTION TISSULAIRE
Patent Applicant/Assignee:
THE REGENTS OF THE UNIVERSITY OF MICHIGAN,
UNIVERSITY OF MASSACHUSETTS MEDICAL CENTER,
CHARLOTTE-MECKLENBERG HOSPITAL AUTHORITY,
BETH ISRAEL - DEACONESS MEDICAL CENTER,
MOONEY David J,
KIM Byung-Soo,
BROWN Andrea N,
HALBERSTADT Craig R,
VACANTI Chuck,
MARLER Jennifer,
Inventor(s):
MOONEY David J,
KIM Byung-Soo,
BROWN Andrea N,
HALBERSTADT Craig R,
VACANTI Chuck,
MARLER Jennifer
Patent and Priority Information (Country, Number, Date):
Patent: WO 9925396 A2 19990527

Application: WO 98US24409 19981117 (PCT/WO US9824409)
Priority Application: US 9766926 19971117
Designated States: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW GH GM KE LS MW SD SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
Publication Language: English
Fulltext Word Count: 7553

English Abstract

A tissue engineering method comprising seeding a polymer matrix with a first cell type and a second cell type; and culturing the seeded matrix under conditions suitable for cell growth or maintenance, whereby a tissue comprising a mixed cell population containing both the first and second cell types is produced.

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File 155:MEDLINE(R) 1966-2003/Jan W3
File   5:Biosis Previews(R) 1969-2003/Jan W3
         (c) 2003 BIOSIS
File  73:EMBASE 1974-2003/Jan W3
         (c) 2003 Elsevier Science B.V.
File  34:SciSearch(R) Cited Ref Sci 1990-2003/Jan W3
         (c) 2003 Inst for Sci Info
File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec
         (c) 1998 Inst for Sci Info

Set     Items   Description
S1         23   AU='MURRAY M F'
S2         30   AU='MURRAY M M'
S3         35   AU='MURRAY M.F.' OR AU='MURRAY M.M.'
S4         23   AU='MURRAY MF'
S5          6   AU='MURRAY MICHAEL F'
S6         49   AU='MURRAY MM'
S7          6   AU='MURRAY MARTHA':AU='MURRAY MARTHA MEANEY'
S8         82   AU='MARLER J' OR AU='MARLER J.'
S9         15   AU='MARLER JENNIFER' OR AU='MARLER JENNIFER J' OR AU='MARL-
              ER JJ'
S10         9   AU='MARLER J J' OR AU='MARLER J.J.'
S11       278   S1:S10
S12       137   S11/2003 OR S11/2002 OR S11/2001 OR S11/2000
S13       141   S11 NOT S12
S14    291905   ARTICULAR OR INTRAARTICULAR OR MENIS?? OR LIGAMENT? ? OR C-
              ARTILAG?
S15     79814   FIBRIN
S16    822466   COLLAGEN OR PLATELET? ? OR THROMBOCYTE? ?
S17         6   S13 AND S14:S16
S18   2812962   TISSUE
S19        39   S13 AND S18
S20        39   S17 OR S19
S21        15   RD (unique items)
S22        15   Sort S21/ALL/PY,D
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Dec 1999

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Nov 1999

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Jan 1999

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Transplantation of cells in matrices for tissue regeneration.
1998

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Aug 1997

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06615018 EMBASE No: 1996279795
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1996

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May 25 1995

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1995

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03584321 Genuine Article#: PN942 Number of References: 18
Title: IMPROVED RELIABILITY OF THE NIH STROKE SCALE USING VIDEO TRAINING (
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07840380 93370736 PMID: 8363117
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Sep 1993

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07367706 BIOSIS NO.: 000040005035
A DOSE-ESCALATION SAFETY STUDY OF INTRAVENOUS TISSUE **PLASMINOGEN ACTIVATOR IN PATIENTS TREATED FROM 90 TO 180 MINUTES FROM ONSET OF ACUTE ISCHEMIC STROKE**
1990

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07071431 BIOSIS NO.: 000039008124
DELAYS IN SEEKING MEDICAL ATTENTION IN PATIENTS WITH ACUTE STROKE
1990

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06961222 BIOSIS NO.: 000038077261
SAFETY AND POTENTIAL EFFICACY OF TISSUE **PLASMINOGEN ACTIVATOR TPA FOR STROKE**
1990
?t22/7/4

22/7/4 (Item 4 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

11738731 BIOSIS NO.: 199800519427
Transplantation of cells in matrices for tissue **regeneration.**
AUTHOR: **Marler Jennifer J** ; Upton Joseph; Langer Robert; Vacanti Joseph P (a
AUTHOR ADDRESS: (a)Lab. Tissue Transplantation, Dep. Surgery, Child. Hosp., 300 Longwood Avenue, Boston, MA 02115**USA
JOURNAL: Advanced Drug Delivery Reviews 33 (1-2):p165-182 Aug. 3, 1998
ISSN: 0169-409X
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LANGUAGE: English